THE PROCESS OF COPING:

AN ALTERNATIVE EXAMINATION

A thesis presented in partial fulfilment

of the requirements for the degree

of Doctor of Philosophy

in Psychology at

Massey University

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1995

FOSTER

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ABSTRACT

The area of research into coping is complex and challenging and there are no agreed methods to examine the facets of coping behaviour. The present research aimed to capture the complexity of the experience of coping as a multi-faceted, dynamic, flowing phenomenon, and to explore the way people experience the changes that occur over time as a stressful event evolves. Coping was conceptualised as a process which is initiated when a person first becomes aware that she or he is under stress and continues to flow and change until there is an indication that an outcome has been reached. The theoretical framework was based on the transactional perspective of Lazarus and Folkman (1984) and included the concepts of appraisal, coping strategies, reactions and outcome. An alternative methodology was used which corresponded to the theoretical framework and attempted to capture how people coped with stressful events individually and collectively. The analyses provided a finer-grained examination of the entire coping process. Two studies were conducted to examine the coping process over time. In the first study, ten participants reported their experiences of coping with short-term stress in daily stressful events. In the second study, nine women reported their experience of coping with the longer term event of gynaecological surgery. They reported their experiences of coping at five phases: prior to the surgery; during hospitalisation; at two stages of the recovery phase; and following the medical clearance.

The results from the first study showed that there was considerable variability in how the participants coped with daily events. In the surgery study it was found that those who had a positive subjective outcome experienced coping as a process differently to those who had a negative subjective outcome. The results from both studies showed that specific patterns of responses between the appraisals, coping strategies, and reactions flowed reciprocally and influenced the outcome. It was found that some patterns were variable. These were considered to be the continual attempts to manage the stressful event, and the effectiveness of these attempts depended on whether the coping process was positive or negative. Other patterns of response appeared to be consistent and these were established in the initial stages. They tended to be maintained over time and were considered to be the main influence in the outcome. When the coping process was generally appraised as positive, then there was a positive outcome. When the coping process was appraised as negative, there were positive attempts at coping but these were outweighed by the negative influences and there was usually a negative outcome. It was concluded that the process of coping is a continually flowing experience which is influenced mainly by cognitive appraisals which are established during the initial stages of a stressful event. It is the specific combinations of appraisals, coping strategies and

reactions which constitute the coping process and influence the outcome. The complexity of the experience of coping and specific patterns of responses can be captured in more detail by the use of an alternative methodology which gathers more detailed information and analyses the data at an individual level as well as at the group level. There were limitations to the methodology used and these are discussed, as are future directions for research.

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Researchers generally view coping behaviour as a mediator between stressful events and adaptational outcomes. The notion of coping is complex and the literature in the area is confusing. Over the last fifteen to twenty years there has been a change in focus from person variables as the sole determinant of coping, to a process-oriented approach. The major emphasis is now on coping as a dynamic, changing, evolving process which involves continual appraisal and reappraisal of the person-environment relationship, and use of the coping strategies which attempt to alter the negative responses to the stressful event. The most pervasive theory in current research is Lazarus and Folkman's (1984) model which offers a sound basis for the coping process to be viewed as dynamic and multi-faceted. A major limitation of the model is the insistence that process and outcome be kept separate and this has led to a focus on process to the exclusion of considering the effectiveness of the coping strategies and the outcome of the event. Process and outcome are linked inevitably and it is important to determine how they influence each other. In the present research, process and outcome were both considered part of the coping process, which was defined as the changing efforts to manage stressful encounters, which are continually appraised over time until evaluation of the effectiveness of the efforts alters the stress.

There is little agreement on the measurement of coping and researchers have generally focused on developing assessments of coping strategies with little emphasis on other aspects of the process. There has continued to be a reliance on traditional quantitative research methods and this has led to knowledge of what people do to cope but there is limited knowledge as to how, when or why people cope. The present research presented an alternative methodology which provided a more detailed in-depth analysis and monitored the entire coping process.

The aim of the present research was to evaluate the coping process as a multi-faceted, flowing, changing phenomenon and to explore the changes in the coping process over time. Chapter one presents a brief review of theories, argues for including outcome as part of the coping process and discusses the need to consider temporal factors. Chapter two describes, reviews, critiques and extends Lazarus and Folkman's (1984) model, and describes the theoretical framework for the present research. Chapter three discusses the measurement of coping and argues for an alternative framework. Chapter four focuses on the method for the first study which investigated daily stressful events. Chapter five presents the results from the daily events study. Chapter six discusses the need to investigate one ongoing event and describes the aim and method of the surgery study. The next three chapters present the results of the surgery study. Chapter seven presents

the descriptive results for all participants. The results for two groups of participants who had different outcomes are presented in chapter eight. Chapter nine examines four case studies, and the conclusions from both studies and implications of the present research are discussed in chapter ten.

CHAPTER ONE:

THE CONCEPT OF COPING

Coping is part of the wide area of stress research and is generally viewed as a mediator between stressful events and adaptational outcomes (Folkman, Lazarus, Gruen, & DeLongis, 1986). Stress can be defined simply as excessive demands which surpass the resources of an individual (Coyne & Lazarus, 1980). An attempt to deal with these demands requires coping efforts which will mediate the adaptational outcome (Pearlin, Menaghan, Lieberman, & Mullan, 1981) and this adaptation can be described as success or failure to function in terms of well-being, social action and somatic health (Lazarus & Folkman, 1984). A simplified perspective suggests that stress can create emotional and physiological disturbances which may result in poor psychological and physical health. Those who cope effectively will remain healthy. Holroyd and Lazarus (1982) maintain that it is effective coping which determines health outcomes, not a result of the presence or absence of stress. Little is known about whether or not some coping behaviours are more effective than others, and any consequent effects these have on adaptation.

Coping is a term well known to the lay person, yet its common usage belies the facets of coping behaviour that researchers have identified. Most researchers agree that coping can be defined generally as a response to stress (Fleming, Baum, & Singer, 1984). However, the concept is more complex than this definition suggests. This complexity makes it difficult for an agreement on a specific definition to be reached (Billings & Moos, 1981; Fleming, Baum, & Singer, 1984; Carpenter, 1992; Menaghan, 1983; Taylor, 1990), and consequently there are many variations, often with only subtle differences between them. For example, Fleishman (1984) refers to coping as "both overt and covert behaviours that are taken to reduce or eliminate psychological distress or stressful conditions" (p. 229). Stone and Neale (1984) provide a more specific definition which limits coping to conscious efforts. They view coping as "those behaviours and thoughts which are consciously used by an individual to handle or control the effects of anticipating or experiencing a stressful situation" (p. 893). Lazarus and Folkman (1984) provide a definition which is more dynamic and does not imply that coping will be successful. They define coping as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141).

Edwards (1988) maintains that because of this lack of agreement on a definition. the coping literature is not cohesive, and the only unanimity is that coping is important. Cohen (1987) states that there is no agreement on the best conceptual framework. and Tunks and Bellissimo (1988) maintain that there is little consensus on what coping is and how to measure and distinguish it. Carpenter (1992) holds a more positive view as he maintains that different definitions are useful as research into coping is still relatively new, but that it is important to define the concept clearly to avoid confusion and allow theoretical and empirical comparison. These statements summarise the difficulties facing researchers in the area of coping behaviour, and the literature is vast. complex and confusing. There is little agreement on definitions and terminology and this leads to a lack of cohesion in the understanding of coping. Nevertheless. over the last fifteen to twenty years conceptual frameworks have developed and empirical evidence has been gathered which have led to an increased understanding of coping behaviour.

THEORIES OF COPING

The area of research into stress can be viewed as a continuum. At one extreme are the sources of stress. which are generally viewed as the perception of a stressful event (Pearlin, Menaghan. Lieberman & Mullan, 1981). At the other extreme is long-term adaptation which may include social functioning. morale and somatic health (Lazarus & Folkman, 1984). Coping is a key component in the stress continuum and theorists vary as to where they place coping on the continuum. For example, some include adaptation as an important aspect of coping (e.g. White, 1974), and others prefer to conceptualise coping in the middle of the continuum in a pure mediating role (e.g. Lazarus & Folkman, 1984).

Historical perspectives

There are numerous theories of coping, and over the last fifteen to twenty years there has been a change in the way coping is viewed. Historically coping was considered to have just one important factor which determined how a person coped, namely person variables. This factor was considered to be stable over time and across all situations (Laux and Vossel,1982; McCrae,1984). Two main approaches focusing on person variables were evident. The psychoanalytic approach offered a basis for coping research, and considered ego processes to be the method of coping. Early empirical studies found evidence that defense mechanisms may be important in coping behaviour. For example, Houston (1973). found that denial was used by subjects to cope with threatening situations. Psychoanalytic theories are now generally out-dated as it has become increasingly clear that there is more to human behaviour than being driven by

unconscious mechanisms, and that there is no efficient method of identifying and measuring defense mechanisms (Whitman, 1980).

The trait approach focused on particular personality traits or styles as being the main determinant of coping behaviour, and it assumes that people with certain characteristics are able to cope with stress effectively (Edwards, 1988). For example, Holahan and Moos (1985), examined subjects who exhibited self-confidence and had an easy-going disposition, and found both these to be related to stress-resistance. Holahan and Moos (1987) maintain that there is sufficient evidence to suggest that the personality factors of hardiness, self-confidence, mastery and internal locus of control are connected to coping behaviours.

It is now widely accepted that the psychoanalytic and trait approaches are limited perspectives. A major criticism is that these perspectives do not provide adequate information about the actual thoughts and behaviours involved in coping behaviour. (Lazarus & Launier, 1978; Folkman & Lazarus, 1980; Folkman, 1982). Folkman, Lazarus, Dunkel-Schetter, DeLongis and Gruen (1986) state that the more recent research has highlighted the need to examine the actual coping behaviours and the contexts in which these occur. These issues have become a focus for the more recent development of the transactional perspective.

Transactional models

Current models focus on the behaviours and processes that actually occur in coping, and consider that there is more than one determinant involved in coping behaviour. Coping may vary across situations and over time and is considered by several researchers to be a multifaceted, dynamic, evolving process (e.g. Folkman, Schaefer, & Lazarus, 1979; Holroyd & Lazarus, 1982; Pearlin & Schooler, 1978). The transactional perspective is a model which focuses on coping as a process, and the transaction is considered to be between the person and the environment.

According to Laux and Vossel (1982), a transactional perspective focuses on describing the actual behaviour involved in coping and the consequences of coping responses in a particular stressful situation. They also maintain that transactional means that there is reciprocal causation, as opposed to interactional, which has unidirectional causation. This highlights the dynamic nature of coping and there are several theorists who have developed transactional models.

Cox and MacKay (Cox, 1978) propose a five stage transactional model of stress which extends from the sources of the stress to feedback concerning the effectiveness of coping. When a person perceives that there is an imbalance between the demands of the

situation and his or her ability to cope, then stress is experienced. Coping involves psychological and physiological responses. These responses have consequences, which is an aspect that Cox and MacKay consider extremely important, yet is often overlooked by other theorists. If coping is ineffective then stress continues. This model is one of stress, which includes coping, and so covers the whole of the stress continuum.

Edwards (1988) considers that his approach is a process theory which emphasises the impact of person and situation variables on coping, and the way that coping influences stress and well-being. Coping occurs when an individual is motivated to do something about reducing the stress and directs coping strategies toward the causes of stress. Edwards discusses the determinants and consequences of coping at length, and includes well-being as an important aspect of the outcome of coping, thus extending his concept of coping to the far end of the stress continuum.

Lazarus and Folkman (1984) propose a transactional model which has two central concepts: cognitive appraisal and coping. They state that:

> "cognitive appraisal is an evaluative process that determines why and to what extent a particular transaction or series of transactions between the person and environment is stressful. Coping is the process through which the individual manages the demands of the person-environment relationship that are appraised as stressful and the emotions they generate" (p. 19).

The emphasis in appraisal is that it is a cognitive evaluation, the emphasis in coping is on the management of the stressful event. The type of coping response used is based on an appraisal of the best method to achieve the outcome that is desired (Roskies & Lazarus, 1980).

Parkes (1986) suggests that current research methods are not yet adequate to deal with the theoretical and empirical complexity of transactional process models. However these models offer a detailed explanation of the process of coping, and are therefore superior to previous theories. There are similarities between the three transactional models described, as all emphasise the importance of cognitive appraisal, the environment, and that coping is a process consisting of actual behaviours and thoughts. Cox and MacKay (1978), and Edwards (1988) consider the outcome of the coping responses to be an important aspect which needs to be included in their models of coping, whereas Lazarus and Folkman (1984), although they acknowledge the importance of outcome, prefer to keep it separate from process.

The transactional theories have potential for empirical validation. The Cox and MacKay (1978), and Edwards (1988) models at this time remain theoretical, while Lazarus and

his colleagues have researched their model extensively, and substantial progress has been made on the knowledge and understanding of coping. However, Lazarus's research into the theory lacks the integration of an important component that is contained in the other two transactional theories: adaptational outcome.

ADAPTATION AND EFFECTIVENESS OF COPING

There is an existing controversy concerning the role of adaptational outcome in coping. Lazarus and Folkman (1984) emphasise that coping is typically equated with successful adaptation, i.e. if coping has occurred then the outcome must be successful. They maintain this results in the confounding of coping and its outcome, and does not allow the separate investigation of coping processes regardless of outcome. Menaghan (1983) maintains that the notion of effectiveness is implicit in the concept of coping, that is, it implies that stress has been managed successfully, and therefore has an effect on adaptation.

The notion of effectiveness of coping is an important issue in adaptational outcome. If a person chooses a coping strategy and perceives it as effective, then presumably the outcome will be positive. If a person perceives a coping strategy as ineffective the outcome may be negative but it may also be unknown. There appears to be a dearth of conceptual models and empirical evidence of the notion of effectiveness of coping strategies. There is little agreement amongst those who do consider the concept, and the determinants of perceived effectiveness are not known. Very little is known about the relative effectiveness of the different coping strategies (Aldwin & Revenson, 1987; Houston, 1977; Pearlin & Schooler, 1978), and it is considered that the effectiveness of coping strategies has had less research consideration than other aspects of coping (Pearlin, 1991).

Folkman, Chesney, McKusick, Ironson, Johnson and Coates (1991) maintain that it is the theoretical model which determines the definition of effective coping. Sometimes the definition is not clear, for example, some researchers consider that effectiveness is implicit in the concept of coping (e.g. Menaghan, 1983), that is, it infers that stress has been managed successfully. This concept of effectiveness does not allow for a specific focus for research purposes. Other researchers focus more specifically on the effectiveness of the coping strategies used, i.e. how effective what was actually done to manage the stress has been. This conceptualisation does allow for a specific definition and research focus. These authors also maintain that by defining effectiveness in this way it is possible to determine which strategies are effective for which stressors (e.g. Thoits, 1986). The role that evaluating effectiveness plays in coping and the evaluation

itself is important as people presumably use coping strategies even though they may not be successful, so strategies may be perceived as effective or ineffective.

Lazarus and Folkman (1984) suggest that it is necessary to consider the possibility that coping strategies can be effective or ineffective. depending on the person and/or the context. They maintain that a strategy that is effective in one situation can be ineffective in another. and vice versa. Felton, Revenson and Hindricksen (1984) and Folkman, Lazarus, Dunkel-Schetter, DeLongis and Gruen (1986) suggest that it is not the effectiveness of one strategy over another. but the use of strategies which are appropriate for the situation. which may determine effectiveness.

It is not known what happens when a strategy is perceived as ineffective. Menaghan (1983) suggests that there might be three possibilities. First. it may continue to be used despite the perceived ineffectiveness. This seems the most likely route to a negative outcome. If the distress is not reduced at all subsequent physiological reactions may result. and when this happens long-term it may lead to health problems. Second. strategies may be tried and be found lacking, in which case presumably others will be tried. Third. strategies may be avoided after being evaluated as not likely to be helpful. It is important to discover the issues surrounding these judgements as this is an essential element of coping behaviour, yet one that has received very little attention.

Newton and Keenan (1985) maintain that it is the individual differences and the environment which are important in coping effectiveness and that it is not appropriate to discover universal effective coping strategies. Mattlin, Wethington, and Kessler, (1990) found that the effectiveness of coping strategies differs according to the situation. This is an important finding which has implications for the variability of coping behaviour and individual and/or situational differences.

Cameron and Meichenbaum (1982) suggest that there is a temporal sequence to effective coping which interacts with appraisal processes as the stressful event unfolds. They are one of the few researchers to suggest specific prerequisites for effective coping. These include a realistic appraisal of the situation, the necessary skills to deal with the stress, the ability to use appropriate coping strategies, and the likelihood that a rapid reduction of the stress symptoms can be achieved. They maintain that ineffective coping occurs if any of these criteria are not met. Their perspective highlights one of the key elements of a transactional model: that there is constant reciprocity between the person and the environment and it is this reciprocity that determines the nature of coping, in this case effective coping specifically.

Researchers have not reached consensus as to what determines effective coping but they do agree that there are other factors which influence effectiveness. Within a transactional perspective these other factors are generally viewed as part of coping as a process which creates the multifaceted and dynamic nature of coping.

COPING AS A PROCESS

It is now becoming common for researchers to refer to the coping process or processes but there appears to be a discrepancy between the use of the term theoretically and its usage within research. Researchers often appear to equate the coping process with taxonomies of coping strategies (e.g. Amirkhan, 1990; Auerbach, 1989; Holahan and Moos, 1987). In contrast, the theoretical understanding of the coping process is much more comprehensive and includes several aspects involved in coping, not just the coping strategies.

Lazarus and Folkman (1984) offer a description of coping as a process which has advanced the knowledge of coping behaviour considerably. Briefly, the theory suggests that when a person is faced with a possible stressful event, he or she evaluates whether or not the encounter is relevant to his or her well-being through a process of primary appraisal. If the event is appraised as stressful there may be emotional and physiological changes, and coping becomes necessary. The individual evaluates the various coping options through secondary appraisal. There is a continuous appraisal process which provides the person with information on emotional, physiological, and environmental responses to the coping strategies in use. It is considered that all of these aspects are important in influencing the way a person deals with a stressful situation and all need to be investigated simultaneously so the coping process as a whole can be examined.

Lazarus and Folkman's (1984) model offers a sound basis for investigating coping as a process. They view the process approach as having three main components: It focuses on the actual thoughts and actions of an individual; this is examined within a particular context; and there are changes in these thoughts and actions as a stressful event evolves. This results in a dynamic, changing process which involves continual appraisal and reappraisal of the person-environment relationship. Lazarus and Folkman use the analogy of the grief process to exemplify the meaning of coping as a process. There are several stages to grieving and the entire process may vary in length. This is also true of the coping process.

Lazarus' (1966) theory and the reformulation of this (Lazarus & Folkman, 1984) has become the most pervasive model in coping research. Stone, Greenberg, Kennedy-Moore, and Newman (1991) maintain that the theory has had a major influence on the

conceptualisation of coping. The strongest aspects of Lazarus and Folkman's (1984) are the general concepts of appraisal and coping and these have been researched extensively. One over-riding deficiency is evident. and that is the failure to examine and measure the coping process as a whole. Park and Cohen (1992) offer a conceptualisation of the coping process which is based on Lazarus and Folkman's (1984) theory and which extends to the entire process. They describe the coping process as having four sequential stages: a stressful event: the appraisal of the event. including the effectiveness of coping strategies: the coping behaviour: and health outcomes. Lazarus and Folkman discuss the coping process at length, and acknowledge all the possible determinants and facets, including the effectiveness of coping strategies and adaptational outcome. So theoretically they view the coping process in its entirety but empirically they insist on the separation of process and outcome and this means that investigation of what happens when a person is faced with a stressful event is incomplete.

Process and outcome

Lazarus and Folkman's (1984) arguments for the separate study of process (the efforts to manage the stress) and outcome (the effect that the efforts to manage have) appear to be largely a reaction to the psychoanalytic approach which suggests that coping implies effectiveness and defense mechanisms imply ineffectiveness. Their argument is sound as it has been important to investigate coping strategies and appraisal independent of outcome to advance knowledge. Within the traditional research methodology of developing and using psychometrically validated checklists to investigate coping strategies the issue of confounding variables is a crucial factor. However, knowledge of coping as a process has now extended to a point where outcome needs to be included as part of the process to determine how this is affected by the dynamic encounter. Process and outcome are linked inevitably. There will always be at least an immediate outcome when coping processes occur, so investigation of short-term adaptation at least is imperative.

Process and outcome, as defined theoretically by Lazarus and Folkman (1984) need to be considered together as part of the entire coping process so that the two can be linked to ascertain how individuals deal with a stressful situation from the time they are aware they are under stress until there are changes that indicate that the stress has been managed in some way. A brief outline of the history of psychotherapy research illustrates this point. Hersen and Barlow (1978) describe the historical aspects of process and outcome in psychotherapy research. Process research investigated what occurred during therapy, and in the late 1950's and early 1960's the amount of this type of investigation increased to the point where process and outcome became polarised, so

researchers were investigating one without regard to the other. Eventually there was a decline in process research into psychotherapy as a result of the unwillingness to relate process variables to outcome. It seems a similar polarisation has occurred in coping research. with the decline in outcome research. The gap is already evident in that very little is known about the effectiveness of coping strategies. If researchers choose to concentrate on this area, then investigation into the coping process may decline.

Hersen and Barlow (1978) describe the work of Shapiro in the 1950's which was largely disregarded. He repeatedly measured changes during therapy and continued these measures to an endpoint, so that process was related to outcome and the artificial gap was closed. It is important that a similar perspective be taken in the coping process. Process implies that there will be an endpoint. For example, in the grief process there is an expectation that there will be a time when a person considers him or herself through the grief stages, once the recovery phase is endured (Schulz, 1978). So, in a similar manner, in the present research the process of coping is viewed as a changing. flowing, multifaceted and evolving process which continues until a person considers that he or she has dealt with the situation in some way, thereby relating process to outcome. A central concept in a transactional perspective is that the dynamic nature of the coping process involves the changes that occur as a stressful event evolves.

One of the fundamental assumptions of Lazarus' concept of the coping process is that it is dynamic and changing. According to Lazarus and Folkman (1984), these changes occur as a result of continual appraisals and reappraisals of the relationship between the person and the environment, and of the coping strategies which attempt to alter the negative responses to the stressful event. Folkman and Lazarus (1985) state that the central element of stress, coping and adaptation is change and they obtained some empirical evidence to support this notion. They investigated three stages of an examination and found that there were changes in emotions and coping as the examination unfolded, from anticipating the event to learning of its outcome. The investigation of several aspects (appraisals, coping and emotions) and the results of this study are an encouraging start to determining more about change in the coping process.

The basic premises of Lazarus and Folkman's (1984) theory appear to go a long way toward answering some of the questions about the coping process. The model is comprehensive and research has begun to reveal the nature of the multifaceted. dynamic process of coping, (e.g. Folkman & Lazarus, 1985; Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986; Newton & Keenan, 1985) and the appraisal process, (e.g. Folkman & Lazarus, 1980; Folkman et al., 1986: Ptacek, Smith & Zanas, 1992). It is a complex theory, which parallels the complexity of the reality of the experience of coping. However, as Ptacek et al. (1992) maintain, there are many gaps in the

understanding of coping as a process. In 1980 Silver and Wortman raised pertinent questions about the coping process such as what determines which coping strategies are selected, and how do the different aspects of the coping process influence one another and relate to adaptation? These are important questions which to date have remained unanswered.

One of the reasons for this may be that researchers investigate specific aspects of coping rather than examining the coping process in a more holistic manner. Dewe (1989) maintains that there is now an empirical separation between the appraisal process and the coping process, and suggests that it is essential to investigate both processes simultaneously so that a better understanding is gained of the way the transaction between the individual and the environment operates. Lazarus and Folkman (1984) also maintain that appraisal is an equal mediator to the coping strategies in a stressful encounter and both form part of the coping process, yet researchers continue to concentrate largely on the aspect of coping strategies.

To date, much has been discovered about *what* people do to cope with stress, but very little has been ascertained about *how*, *when* and *why* individuals do what they do when faced with a stressful situation. Amirkhan (1991) contends assessment will be difficult until there is agreement on the fundamental aspects of coping. Edwards and Cooper (1988) maintain that researchers do not place enough emphasis on the determinants of coping. If this was done then it would be possible to discover how and why people cope in the way they do, and will help identify the process (Edwards, 1988). One of the reasons for this lack of knowledge may be due to the insistence of researchers to confine measurement of coping to determining the strategies that are used, rather than attempting to measure the entire coping process.

Lazarus and Folkman (1984) state that for progress to be made there must be more emphasis on the variables of coping as changing processes. This is an important and pertinent point in advancing knowledge of coping, yet how the changes occur in the coping process remains largely theoretical. Bolger (1990) states that it is rare for researchers to view coping as a process over time. The nature of the definition of a coping process indicates that the way people cope can happen only over time, whether it be over a few minutes, a few hours, or several days, months or years. Temporal factors need to be a consideration but this is an area which has received very little attention.

Temporal Factors

When the coping process is viewed as dynamic. temporal factors become important so that the changes can be captured and measured over time. Lazarus and Folkman (1984) maintain that the temporal factors may be an extremely important aspect of coping research. but there has been very little attention paid to them. Lazarus and Folkman view time as having three main influences on appraisal: imminence. which is the length of time the event is anticipated, and they maintain that the intensity of the appraisal (e.g. a perception of harm or threat) increases as the stressful event gets closer: temporal uncertainty. which refers to not knowing just when an event is going to happen: and duration. which is the length of time that a stressful event lasts.

There appears to be no recent research into temporal factors but some earlier experimental research investigated these factors. For example, Folkins (1970) investigated imminence and psychological stress reactions and the results suggested that a longer wait gave participants sufficient time to consider and use effective coping strategies, whereas the shorter time did not. Monat, Averill and Lazarus (1972) studied temporal uncertainty in a laboratory setting. They found that the conditions where the time of the stressor (electric shock) was unknown were initially more threatening than the time known conditions.

There is almost no research into how the different durations of stressful events relate to aspects of the coping process, and investigation into this would be beneficial. particularly so the relationship to outcome can be ascertained (Lazarus & Folkman, 1984). Duration may affect the effectiveness of coping strategies as there may be a limit to how long some coping strategies can remain effective. How long an event lasts may have an effect on a person's coping process as the longer a stressful event persists the more complex the coping may need to be.

These laboratory results have implications for investigating time in a natural event. Perhaps little anticipation time means using automatic or habitual coping strategies which may not be so effective, or the longer the anticipation time the more likelihood of deciding on more effective coping strategies. Do people engage in an effective mode of coping if they are unsure when a stressful event is to occur? Inclusion of the effectiveness of coping strategies as part of the coping process allows the opportunities for such possibilities to be investigated.

More recently, some authors have begun to address some of the temporal issues involved in coping behaviour. Pearlin (1991) discusses the temporal factors involved in coping in a much wider context and maintains that the time that the impact of the stress

occurs has the greatest effect as this influences the type of coping strategies that are used. Ptacek et al. (1992) maintain that *when* the use of coping strategies occurs may be more important than determining *if* they occur in the sequence of the coping experience. This is an important point when coping is viewed as a process as the time that the coping strategies are used may influence the way the coping process evolves. Auerbach (1992) also discusses the timing of stressors and considers the notion of different temporal phases of coping. He maintains different coping strategies may be used at different phases of a stressful event, and that as coping is sequential there will inevitably be changes in the appraisal process as well. His notion of temporal phases is most important for understanding the coping process. When coping is considered to be a dynamic process the notion that coping behaviour changes over time is implicit in the definition yet temporal factors need to be made explicit so that the way in which these changes occur can be monitored.

The understanding of temporal factors is an integral part of researching the coping process. It is not only the length or the anticipation of the event that is important but also the length of time each aspect of the process lasts, and when each aspect occurs. These factors need to be examined within the coping process to enhance the understanding of coping at a finer level. At a broader level the investigation of changes in the coping process over time is crucial to a process-oriented approach to ascertain how people experience an evolving process.

SUMMARY

The current widely accepted notion of coping is that it is multifaceted, dynamic and changing, and varying across situations and over time. It is also viewed theoretically as a process through which individuals progress from the time they are aware of a stressful event until the situation has been altered in some way through coping efforts. However, researchers have tended to focus on specific aspects of coping such as coping strategies and this does not capture the complexity of the coping process.

The most pervasive theory in research is that of Lazarus and Folkman (1984) who offer a transactional approach to coping. Their transactional model offers the most potential for two major reasons. First, the theoretical description of the process of coping is clearly defined and detailed; second, there is substantial empirical support for some of the theoretical assumptions. The major disadvantage is their insistence on separating process and outcome. This can be overcome by extending their model to capture a more holistic view of coping by including the effectiveness of coping strategies and adaptational outcome, thus linking the two concepts of process and outcome.

To capture the dynamic, multi-faceted, changing nature of the process, it is necessary to include temporal factors to ascertain what happens in the coping process over time. In the present research the coping process is defined as *how people experience the changing efforts to manage stressful encounters, which are continually appraised over time, until an evaluation of the effectiveness of the efforts alters the stress and influences the outcome.*

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CHAPTER TWO:

AN EXTENDED MODEL OF COPING

Coping is considered to be a dynamic and flowing process. consisting of several aspects which change continually as a person deals with a stressful event. The intention of the present research was to examine the coping process in a holistic manner to capture the complexity of the experience of coping. The present chapter describes the theoretical concepts and establishes the boundaries for the investigation of the coping process. The present research was based on Lazarus and Folkman's (1984) model and their conceptualisation is described. reviewed. critiqued and extended. In addition. the hypothetical constructs involved in the coping process are described and defined at the conceptual level. The term 'constructs' refers to the processes which are inferred to be part of the experience of the process of coping. The constructs involved are the coping strategies used, the cognitive appraisal processes, the outcome of the stressful event. and the emotional, physical and cognitive reactions experienced.

COPING STRATEGIES

Previous research has been based largely on developing and using taxonomies of coping strategies and there has been a continuing confusion between the terminology used to define coping in a general sense and the specific coping attempts that are used. In the present research a distinction is made between the more general use of the term coping or coping behaviour which refers to the overall experience of coping, and coping strategies (or strategies), which is the term used to describe specific attempts to deal with a stressful situation. Another confusion in terminology is that when most researchers describe coping processes they are actually referring to taxonomies of coping strategies, i.e. actual cognitive, behavioural or unconscious attempts that people make to deal with a stressful situation. There are an infinite number of coping strategies available, and many taxonomies have been developed. It is considered that there are problems with the measurement of coping strategies as there is little agreement between researchers on the best way to measure facets of coping behaviour. These problems and issues surrounding the measurement of coping are discussed in the next chapter.

Coping strategies are a central concept in Lazarus and Folkman's theory and they define them as "cognitive and behavioural efforts to manage (master, reduce or tolerate) a troubled person-environment relationship" (Folkman & Lazarus, 1985, p. 152). They consider that coping strategies have two major functions: regulating emotional distress and attempting to solve the problem. Folkman and Lazarus (1980) propose a typology of strategies which corresponds to their conceptualisation of coping strategy functions.

They consider there are two types. Emotion-focused strategies are attempts to manage or reduce emotional distress and are considered to be used when a person has decided that nothing can be done to change the situation. Problem-focused coping strategies are attempts to manage or alter the situation. and are considered to be used when a person decides there is something that can be done to alter the situation. In their 1980 study they found that both types of coping strategies were used in nearly all the stressful events they investigated.

Lazarus and Folkman (1984) state that their distinction between problem-focused coping strategies and emotion-focused coping strategies is a crucial element of their perspective. Thus, their classification of coping strategies is based on this distinction. Lazarus and Folkman's typology of coping strategies has been extensively researched and measured. perhaps to the point of exclusion of adequate investigation and assessment of other aspects of the model. When coping is viewed as a process, coping strategies have an essential and pivotal function. but it is the reciprocal influence with the other aspects that is important, and the focus is on the *process* rather than the coping strategies. The focus on process constitutes a major difference between the present research and previous research. Therefore the conceptualisation of the function of coping strategies was different to that of Lazarus and Folkman. Within their framework a coping function is the intent of the *use* of the strategy, as distinct from the *effectiveness* that the strategy has, which they refer to as outcome. In the present research the focus for coping strategies is on usage of the strategies, in contrast to the effectiveness. The distinction between regulating emotional distress and resolving the problem is retained. but these functions refer to the outcome (as distinct from the effectiveness) rather than the coping strategies.

The present research used a definition similar to Lazarus and Folkman's (1984) definition of coping strategies. Coping strategies are defined as *the attempts made to alter the responses to a stressful situation.* There are some issues concerning coping strategies which have not been determined adequately. For example, the number of strategies that may be used at any given time, how these relate to each other, the sequence of use. and whether or not the use of strategies is separable to the effectiveness of strategies. These are important issues in the coping process as they may be influencing factors in the changes that occur and may lead to a better understanding of the temporal factors. These issues were incorporated into the measurement of the coping process in the present research.

APPRAISAL

Appraisal is another key concept essential to a transactional theory of psychological stress and coping (Lazarus 1982; Lazarus & Folkman. 1984). Lazarus and Launier (1978) define appraisal as "a continuously changing set of judgements about the significance of the flow of events for the person's well-being" (p. 302). During a stressful encounter coping strategies and appraisal mutually influence each other (Folkman & Lazarus. 1980; Folkman. 1982). Stone. Helder and Schneider (1988) consider that failure to include appraisal in coping research may contribute to misleading conclusions. This is a pertinent point when considering coping as a process. Since appraisal is part of the coping process its inclusion is crucial to the understanding of how people experience coping. If the focus remains on coping strategies and/or the investigation of constructs separately. then there will not be conclusions drawn accurately on the reality of the experience of coping.

The concept of appraisal can be interpreted liberally to include any cognitive factors which may be experienced as part of the coping process, and it is how the appraisals flow reciprocally with the other constructs of the coping process which need to be examined. One of the main difficulties in the conceptualisation of appraisal and coping strategies is that the two may be so inter-related that they are fused. For example, a commonly classified coping strategy is any variation of situation redefinition, which is defined as attempting to view the situation in a more positive way. (Stone & Neale, 1984). Since this is a cognitive strategy. it can also be interpreted as an appraisal of the situation. Folkman and Lazarus (1985) suggest that it is not possible to reliably distinguish when an appraisal is actually a form of coping and when it is not, despite adequate definitions. This is an important point and it is better to recognise that in researching cognitive concepts there will be difficulties in investigating the differences between the neatly defined concepts and the reality of the experience. The present research attempts to investigate the reality of the experience as individuals deal with stressful events, but to do so within the coping process requires clear definitions of appraisal and other constructs.

Lazarus (1966) was very specific in his definition of appraisal. He identified two kinds of cognitive appraisal: primary and secondary. In primary appraisal the individual evaluates whether there is anything at all at stake which may affect his or her well-being, and in secondary appraisal the individual evaluates what can be done to overcome or manage the stressful event (Folkman, Lazarus, Gruen, & DeLongis, 1986). The various coping options are taken into account and consideration is given to what these will accomplish and whether or not they can be applied effectively.

Primary Appraisal

Primary appraisal is the judgement which determines whether or not coping is necessary. Folkman & Lazarus (1985) consider that appraisals which indicate that stress is present will occur only if a person judges that something is at stake For example, an individual may appraise an event as affecting his or her well-being in some way. When this stress appraisal is made then coping behaviour will follow. There are three kinds of primary appraisal: harm/loss, threat and challenge (Lazarus & Folkman, 1984).

Harm/loss, threat and challenge.

In harm/loss some damage has already occurred as in death of a loved one or an incapacitating injury. Threat involves losses or harms that have not yet occurred but are anticipated as in problems finding a job, or personal illness. Challenge has a more positive, yet stressful, tone and generally requires exceptional efforts from the individual as in job promotion, a new career, or marriage.

The distinction between these primary appraisals is important theoretically but it is difficult to separate them empirically (Coyne & Lazarus, 1980). Folkman (1984) suggests that their cognitive elements and accompanying affective components are different, (e.g. threat emotions are negative, challenge emotions are positive), but the primary appraisals are not necessarily mutually exclusive and can occur simultaneously.

Holroyd and Lazarus (1982) maintain that the main distinction between threat and harm is temporal. Threat involves anticipation of a possible stressful event, and harmful events are those which have already occurred. So for threat appraisals individuals are focusing on the future, attempting to maintain the current situation or trying to prevent harm in some way, whereas harm appraisals focus on interpreting, tolerating, mastering or reinstating the effects of the harm (Coyne & Lazarus, 1980). Lazarus and Folkman (1984) maintain that even when a harm/loss has happened there is always an element of threat as well because every loss has future difficulties involved.

Coyne and Lazarus (1980) see the main difference between threat and challenge as a positive (challenge) versus a negative (threat) tone, depending on whether the individual focuses on the potential gain or harm resulting from the stressful event. Lazarus (1982) suggests that the distinction between threat and challenge is one of the most interesting and obscure questions in coping research. He views them as two very different but closely related appraisals. Lazarus and Folkman (1984) suggest that the relationship between threat and challenge appraisals can alter as a stressful event unfolds. A situation that is at first appraised as more threatening can come to be seen as challenging when coping strategies are used. This is an important point in process terms

as it suggests that the changes that occur in primary appraisal influence the coping process and may contribute to the outcome.

Holroyd and Lazarus (1982) maintain it is usually assumed that challenge has more potential for a successful outcome. e.g. those who appraise the event as challenging may deal with the situation more effectively than those who appraise it as threatening. Lazarus and Folkman (1984) agree that challenge. rather than threat. has important implications for outcome. They suggest that these hypotheses seem worth investigating more closely. Their comments about the differences between the two types of appraisal is speculation as empirical evidence is sparse. As the present research included outcome as part of the coping process these issues were examined.

There appear to be few studies which have specifically investigate harm/losses, threats, and challenges. McCrae (1982, 1984; McCrae & Costa, 1986) conducted a series of investigations into these appraisals. For example. McCrae (1984) examined the influence of losses, threats, and challenges on the choice of coping strategies. Recent life events were categorised into these three primary appraisals. The results provided evidence that the choice of coping strategies differed according to the appraisal categorisation. For example, he found that subjects facing a threat were most likely to use the coping strategies of fatalism, faith and wishful thinking. Those who faced challenge used rational action, positive thinking and perseverance. He concluded that classifying events into losses, threats and challenges has the potential to investigate "important dimensions of psychological meaning in situations" (p. 928). These results suggest that the appraisal of a situation influences the coping strategies used and investigating the reasons is an important aspect of the coping process.

Foster (1988) investigated the use of specific coping strategies in threat and challenge situations. It was found that threat and challenge appraisals were used simultaneously, suggesting that there may not be a clear differentiation between these two primary appraisals. Threat and challenge were classified as objective variables as these were the independent variables, and they were also measured subjectively on a seven point rating scale. The results suggested that the objective manipulation and the subjective appraisal did not necessarily correspond. These results have implications for future studies into threat and challenge as it may not be sufficient to rely on objective classifications. The subjective appraisal appears to have an important role, and in the present research, the way in which people perceive the situation was considered to be part of their experience of coping with a stressful event.

Clearly much of the knowledge of harm/loss, threat and challenge remains theoretical and the process of primary appraisal is still not understood. It is important to

conceptualise primary appraisal as part of the coping process, rather than a separate construct, so that any influence on the selection and use of coping strategies and their effectiveness can be ascertained. It will lead to greater understanding to discover whether or not the different appraisals of harm/loss, threat, and challenge have different consequences. For example, does an appraisal of challenge evoke a certain choice of coping strategies and what effect does this choice have on the outcome of the stressful encounter? Is it different to, and more positive than, a threat or harm/loss appraisal?

Primary appraisal is defined by Lazarus and Folkman (1984), as the evaluation of whether there is anything at stake which may affect well-being. The present research used a more specific definition: *the perception of the stressful event as harm/loss, threat or challenge.* McCrae's (1984) suggestion, that there is a key element concerning the psychological significance of situations, is an important point as it emphasises that the process of primary appraisal may be influential in how people experience coping with a stressful event. Lazarus and Folkman (1984) argue that how a situation is perceived is a major determinant of the coping strategies used, and there is some evidence that this is the case. The present research attempted to ascertain the role of primary appraisal within the coping process and to examine the changes to this appraisal as stressful events evolved over time.

Secondary Appraisal

Lazarus and Folkman (1984) define secondary appraisal as a complex evaluation of what can be done to overcome or improve the stressful event. This includes the evaluation of the available coping strategies and their possible consequences, and deciding whether or not they can be used effectively. They state that a basic component of secondary appraisal is a person's assessment of whether or not something can actually be done to deal with the situation. Coyne and Lazarus (1980) suggest that secondary appraisal processes are likely to be very complex as an individual will need to consider several options simultaneously and these are unlikely to be clear-cut.

Secondary appraisal is one of the least developed links in Lazarus' model as the theoretical explanation is limited and the supporting research is sparse. In 1978 Lazarus and Launier commented that past discussion of secondary appraisal was incomplete. Little more seems to have been achieved since that time. Lazarus and Folkman (1984) themselves state that the understanding of secondary appraisal is still quite limited. There is a dearth of research which has examined the concept of secondary appraisal specifically. Folkman, Lazarus, Dunkel-Schetter, DeLongis and Gruen (1986) examined the functional relations among cognitive appraisal, coping strategies and the outcome of stressful encounters. They measured secondary appraisal with four questions that

referred to the changeability of the situation. They found that different coping strategies were used depending on the evaluations made during secondary appraisal. When the situation was appraised as changeable strategies were used which kept subjects focused on the situation. When the situation was appraised as having to be accepted coping strategies were used to help subjects avoid focusing on the situation.

Most of the limited research has investigated both primary appraisal and secondary appraisal. For example, Folkman and Lazarus (1980) investigated primary and secondary appraisal as part of a study analysing the ways people coped with stressful daily events. Their discussion centres on appraisal as a fusion between primary and secondary appraisal and they stated that their results showed that these cognitive appraisals could be viewed clearly as a determinant of coping. However, the items used to assess appraisal refer to secondary appraisal only. This is no doubt an indication of the lack of clarity that existed in appraisal theory at that time and the difficulties in distinguishing the two appraisals. Lazarus and Folkman (1984) emphasise that primary appraisal does not necessarily precede secondary appraisal, nor is it more important. The two types of appraisal interact with each other in a complex manner to determine the degree of stress and emotional reaction.

By 1986 Lazarus and his colleagues appeared to have defined and assessed primary and secondary appraisal more clearly. Folkman, Lazarus, Gruen, and DeLongis (1986) investigated the relationship between appraisal, personality, coping and health status, in an attempt to determine how consistent appraisal is across different stressful events. The results showed that there was a lot of variability, for example, in secondary appraisal.

It would seem that the issues surrounding secondary appraisal need to be clarified to ascertain the role that this construct plays in the coping process. Sometimes authors discuss cognitive appraisal in a general way and primary and secondary appraisal appear to be viewed as synonymous. For example, Folkman et al. (1991) describe both primary and secondary appraisal and then proceed to discuss primary appraisal only. So not only is there no clear conceptualisation of secondary appraisal but at times the construct appears to be dismissed.

Edwards (1988) has noted the lack of conceptualisation and provides a detailed description of the determinants of coping which focuses on how strategies are selected. He discusses the difference between normative and descriptive approaches to the selection of coping strategies. The normative model suggests that there is a rational decision making process behind selecting coping strategies. Individuals consider all possible coping strategies, evaluate each of these in terms of their probable success and

potential consequences, and select the strategy which provides the best option for well-being. Edwards suggests that individuals under stress are not capable of making choices in a rational manner and so the descriptive model is more useful. This suggests that only a limited number of coping strategies are considered. these are evaluated in a limited and possibly unrealistic manner. and then strategies are selected which may have only minimal impact on well-being.

This is an important distinction. based on research from the decision-making area. and identifies at least two difficulties involved in attempting to address some of the issues involved in coping behaviour. First, the complexity of the appraisal is such that some of the answers to the fundamental issues of coping may be found in other areas of psychology, such as decision-making research. Second. that theoretical perspectives vary in the degree to which they relate to the reality of the experience. Perhaps this partly explains why the understanding of secondary appraisal has remained limited. It is the most complex construct as there are so many potential coping strategies to be evaluated and many different cognitive processes could account for the final selection. So attempting to identify, understand and measure secondary appraisal is a challenging task.

A major deficiency is that the determinants of secondary appraisal have not been examined extensively. The investigation of these would help discover how, when and why a person selects particular coping strategies. The main aspects of secondary appraisal have been suggested by Folkman, Schaefer and Lazarus (1979): the availability of resources including the available coping strategies (repertoire); previous experiences with similar situations (history); and generalised beliefs which involves two aspects (constraints in using suitable coping strategies); and the awareness an individual has of his or her choice of coping strategies. These four aspects provide a basis for conceptualising and investigating secondary appraisal in a more specific and detailed manner to determine the role this construct plays in the coping process.

Repertoire

The concept of repertoire refers to the perceived availability of resources and coping strategies needed to deal with a stressful situation. Cohen (1987) suggests that it may be beneficial to have a large repertoire from which to choose coping strategies so that the most appropriate one can be chosen for any given situation. Meichenbaum and Turk (1982) maintain that it is also essential to be able to access the repertoire when necessary. The repertoire can be accessed only if resources are available. So the reason a strategy is chosen may depend on the perceived access to resources, and these may include, as suggested by Folkman et al. (1979), the availability of resources such as

social support, problem-solving skills, health, energy and morale. The repertoire may be wide so presumably resources are more readily available, or it may be limited because of inaccessibility to resources. For example, use of social support as a coping response has been found to be quite commonly used and is often perceived as useful (Thoits, 1986). Choice of this strategy may be determined by whether or not support is available.

Roskies and Lazarus (1980) suggest that a theoretically relevant issue is whether a wide or narrow range of coping strategies is available as this may influence the effectiveness of the coping strategies. They query whether people who cope effectively use only one or two strategies particularly successfully, or whether they vary the strategies across and within situations. This is an important question and central to some of the unanswered questions in the coping area, especially consistency versus variability and what constitutes effective coping. The repertoire is ultimately linked with the effectiveness of strategies assuming that the more choices one has the more likelihood of finding an effective way of dealing with the event, and that limited choice reduces this likelihood. Cameron and Meichenbaum (1982) and Ostell (1991) suggest that it is not possible to cope effectively if the appropriate resources are lacking, so an adequate repertoire is a necessary condition for effective coping so that the appropriate strategies can be chosen.

Stone, Greenberg, Kennedy-Moore and Newman (1991) found that their subjects did not use some coping strategies for two main reasons: first, because to do so was not typical of their behaviour, so presumably particular coping strategies had not formed part of their repertoire; and second, they considered a particular strategy would not have helped. Presumably in this instance a coping strategy was available from the repertoire but was not appropriate for the particular stressful event. An adequate repertoire is clearly more than the number of available strategies, they need to be appropriate for the particular situation.

The present research included gathering information on the repertoire of coping strategies to help to ascertain why individuals chose the coping strategies they used, and more importantly to investigate whether or not any limitations (e.g. a narrow repertoire) had any influence on the coping process.

History

Each individual brings a history of past experience to any stressful event, but little attention appears to have been paid to this aspect. An important factor may be whether a similar event has occurred before as individuals will be aware of what the previous

consequences were and may select their coping strategies on this basis. If persons are faced with dealing with a specific stressful event for the first time this may influence the coping process as they will not have any previous experience on which to call to appraise the situation. Dolan and White (1988) found that the newness of the situation their participants were responding to affected the use and effectiveness of coping strategies. They suggested that future research needs to focus on the history of dealing with similar situations in the past to ascertain how this affects coping behaviour.

If individuals have found something is effective they may continue to use it. or they may avoid those coping strategies which have been ineffective (Edwards. 1988). Carver, Scheier and Weintraub (1989) suggest that people will use familiar strategies over those that are unfamiliar. They may also use what they have in the past without evaluating how effective it was then. so it may be that familiarity is more important.

The present research attempted to determine the previous experience of coping that people had had to help to ascertain the reasons that people use the coping strategies that they do, and to clarify how familiarity may link to other constructs. especially effectiveness of the strategies.

Constraints

Constraints refer to any limitations to using a preferred coping strategy. For example. a lack of resources and/or a narrow repertoire may mean an intended strategy cannot be used. Roskies and Lazarus (1980) suggest that even with the most highly developed repertoire of coping strategies a person may not be able to use the one they prefer. There may be moral or social constraints which prevents an individual from using particular strategies. For example, a woman whose religious beliefs are anti-abortion wants to have an abortion, but her ultimate choice of a coping strategy is shaped by what she feels she ought to do, not by what she wants to do. It is not known whether the choice of coping response is shaped by moral or religious beliefs and concern about what others think, and if it is, how this influences the coping process.

Carver et al. (1989) consider that there are likely to be situational constraints and ask what happens when the situation is constrained through lack of resources. As already mentioned, they suggest that people are likely to cope more effectively if they are using familiar strategies. If there is a situational constraint where a strategy is not available and they know this has been effective in the past then this likely to influence the coping process as different choices will need to be made.

There appears to be little research into constraints, yet they are likely to be an influential aspect within the coping process. The present research attempted to

determine firstly whether or not people did report constraints when dealing with a stressful event, and to ascertain the nature of these constraints. There was also an attempt to determine the actual influence of constraints on the coping process. For example, there may be a link to the effectiveness of coping strategies as it is possible that if the preferred strategy is not used then the one that is used may not be as effective.

Awareness

Awareness refers to whether or not individuals make a conscious choice of the coping strategies they use, or use them habitually or automatically. Edwards' (1988) theoretical explanation suggests that individuals make a conscious choice of coping strategies, regardless of the normative or descriptive approaches, and that there is an awareness of the process of selecting a suitable strategy. If the descriptive approach is used then the choice of coping strategies will be reduced. Endler and Parker (1990) also maintain that there is a conscious selection process, and that individuals are aware of their coping behaviour. If this is the case then this will influence the coping process as people will be in a position to consider all the options and the consequences, and so presumably make an informed choice of coping strategies based on the most likely outcome.

Coyne & Lazarus (1980) agree that some strategies may be thought about and consciously chosen but also consider that others may be used habitually or automatically. So it may be that people are not always aware of how they select strategies, nor are they aware of the range of possible options available. When habitual or automatic use of coping strategies occurs then secondary appraisal presumably does not form part of the coping process. It may be that other constructs are also not thought about, such as the perceived effectiveness of coping strategies, and if this is the case then this may influence the outcome, either positively or negatively. If a person uses familiar coping strategies automatically there may be no need to make a conscious choice as previous experience had shown that these had been effective. There may be some situations where there simply is no time to consider what is to be used. These are issues which the present research attempted to clarify to determine how this aspect of secondary appraisal influences the coping process.

Summary

There are two main aspects of secondary appraisal conceptualisation which can be improved. First, the focus needs to be on the cognitive processes involved in the *selection* of coping strategies. The investigation of secondary appraisal in a more specific manner has the potential to establish how, when and why a person uses the

coping strategies that they do. It can be a much more pivotal part of the coping process than Lazarus' definition would suggest. The preceding discussion has attempted to clarify the conceptualisation so that a more detailed perspective can provide an opportunity to assess the role of secondary appraisal in the coping process. The present research defined the secondary appraisal aspects of repertoire, history, constraints and awareness to help determine the issues surrounding the selection of coping strategies. When these issues are addressed some of the essence of coping behaviour will be known, and knowledge will be considerably advanced.

The second area of improvement in secondary appraisal concerns the overall complexity of the concept. The fact that knowledge of secondary appraisal has not extended much in recent years may be partially due to the theoretical complexity. It seems that there is too much included in the evaluation of what can be done to overcome a stressful event. To overcome this the present research extended the conceptualisation of appraisal. Lazarus' concept of secondary appraisal was more clearly delineated into two appraisals rather than one, to attempt to reduce some of the complexity. One appraisal focused on the selection of coping strategies and the other on the evaluation of the effectiveness of strategies.

A reconceptualisation of secondary appraisal

Coyne and Lazarus (1980) discuss the complexity of secondary appraisal and the fact that an evaluation involves many different processes, including feedback from the coping attempts. Once a choice of coping strategy has been made there must be a decision made at some point as to the effectiveness of the strategy. Lazarus includes these processes in secondary appraisal but they appear to be two different issues. Secondary appraisal may be able to be defined more clearly if the focus is on the decisions as to which coping strategies will be used.

Lazarus and Folkman (1984) state that the effectiveness of coping strategies depends on "the match between secondary appraisal of resources and the flow of events" (p.186). They describe a scenario which shows that if appropriate strategies are not available for any reason then this will contribute to a negative appraisal of the situation, which leads to the use of ineffective coping strategies, which leads to a negative outcome of the situation. This suggests that the repertoire will have very close links to the effectiveness of coping strategies. Other determinants of secondary appraisal may also be linked closely. For example, it may be that when there are constraints on the choice of coping strategies the coping efforts used may not be as effective. There are many complex processes involved in secondary appraisal such as those outlined by Edwards (1988) in

his discussion of normative and descriptive approaches, and clarifying the evaluations involved will simplify this appraisal and allow more precise information to be gathered.

So the definition for secondary appraisal in the present research is more specific than Lazarus and Folkman's definition: *the evaluation of the availability of potential coping strategies and the decision as to which strategies to use.* Another construct was added, tertiary appraisal, which introduced the specific notion of perceived effectiveness. This appraisal is related to outcome, so this was an attempt to close the gap between process and outcome.

Tertiary Appraisal

Tertiary appraisal refers specifically to the perceived effectiveness or ineffectiveness of the coping strategies used, and this perception alters the reactions of the individual in a positive or negative manner, which in turn affects the outcome. Tertiary appraisal is defined as *the evaluation of the perceived effectiveness of the coping strategies used.*

The issues surrounding the effectiveness of coping strategies were discussed in chapter one. The fact that little research has been done into the effectiveness of coping strategies suggests that researchers have agreed with Lazarus' contention that the emphasis needs to be on appraisal and the coping strategies, rather than outcome. From a theoretical view, Lazarus and Folkman (1984) maintain that effective coping depends on the appraisal and coping strategies that mediate between the demands of the situation, the resources of the person, and the outcome of the encounter. This summarises the role of tertiary appraisal in the coping process. The inclusion of tertiary appraisal extends Lazarus' concept of appraisal and has two main advantages. It will link process and outcome, and it will provide a clearer basis for the investigation of the effectiveness of coping strategies. Pearlin (1991) makes a pertinent point which supports the inclusion of tertiary appraisal:

> "My general impression of coping research is that in recent years it has moved forward very slowly, if not actually stagnated. It is not because of the construct of coping itself, and it is certainly not because there is little left to learn. The study of coping can be revitalised, I believe, by expanding our concerns beyond examining how individuals cope to include also the conditions under which coping effectiveness varies" (p. 275).

A clearer conceptualisation will not only advance knowledge in the coping area as Pearlin suggests, but it will also allow examination of how tertiary appraisal influences and is influenced by other constructs in the coping process. It is expected that there will be a reciprocal flow between all the appraisals (primary, secondary and tertiary) and

that these will influence the use of the coping strategies and ultimately the outcome of a stressful event. An important aspect of the dynamic nature of the coping process is the continual changes of these appraisals that occur as the event unfolds, which can be viewed as reappraisal.

Reappraisal

Lazarus and Folkman (1984) state that "reappraisal is simply an appraisal that follows an earlier appraisal in the same encounter and modifies it. In essence, appraisal and reappraisal do not differ" (p. 38). Therefore reappraisal is a feedback process and refers to the changes a person makes in evaluative judgements (Coyne & Lazarus, 1980). Lazarus and Folkman (1984) suggest that when new information is received the person-environment relationship may alter so the person has to reassess and change the appraisal. The function of reappraisal is that it provides the opportunity to determine how the coping process is proceeding and to make changes if necessary. Reappraisal is considered to be a crucial influencing factor in the coping process as it can be a continual process which maintains the flow of the transaction between the person and the environment.

Reappraisal may influence the sequence of the coping process. Ray, Lindop and Gibson (1982) suggest that the first appraisal will result in some coping efforts and then the situation will be reappraised to determine the outcome of these efforts. This is a simplistic view but it describes the process of tertiary appraisal and suggests that an individual reappraises when there is some indication that there has been a change in the responses to the coping efforts. This indication may come from a change in the situation, such as the resolution of the problem, or the person, such as a reduction in emotional reactions.

It is not clear when reappraisal is most likely to occur, but presumably it can be at any point in the coping process. Since Lazarus and Folkman consider that reappraisal is essentially the same as an appraisal then reappraisal repeats parts of the coping process. When new information is received or there is some indication that a change has occurred, then reappraisal involves an evaluation of the coping process and a decision is made concerning which aspects will be repeated. This may involve altering the perception of the situation (primary appraisal), choosing another coping strategy or using the original coping strategy again (secondary appraisal). The most likely time that reappraisal occurs is when deciding that a coping strategy has been effective or ineffective (tertiary appraisal). If the strategy has been effective then the need for coping behaviour will reduce, and if it has been ineffective there will be a reappraisal.

Ray et al. (1982) suggest that reappraisal can be a coping strategy if it alters the situation or the coping behaviour.

Lazarus and Folkman's concept of reappraisal is used in the present research. It was intended to ascertain how and when reappraisal occurs. and to determine which appraisals and reappraisals influenced the changes over time. Another appraisal which may influence the coping process is the perception of control.

Control

An important aspect of coping behaviour is the degree of personal control a person can apply (Ray. Lindop. & Gibson. 1982). Fleming. Baum. & Singer (1984) also acknowledge the important role control may play in coping behaviour, and Affleck. Tennen. Pfeiffer and Fifield (1987) contend that control appraisals may be a forerunner to coping behaviour.

The concept of control is very loosely defined by Lazarus and Folkman (1984). They maintain that there is no one concept of control. but that it has several connotations and is used differently by different authors. Likewise. they do not focus on control as one specific aspect, and state that it influences several aspects of the coping process. Folkman (1984) provides a theoretical analysis of the concept of personal control. She emphasises that control can have multiple functions in any stressful event. The focus in the present research was on the perception of personal control. It is considered a form of appraisal and it may have a wider influence on the coping process than the more specific primary, secondary and tertiary appraisals.

There is sufficient evidence to suggest the importance of the concept of control, (e.g., Denney & Frisch. 1981; Lefcourt. 1992; Parkes. 1984), the difficulty is defining it and placing it within the process. Lefcourt (1992) comments that the role of control in coping behaviour is neither simple nor straightforward. There are several ways that control may influence the coping process. There may be an influence on primary appraisal, for example, when an individual feels he or she has control over the situation then the most likely primary appraisal may be challenge (Lazarus and Folkman, 1982). Folkman (1984) states that the relationships among control and primary appraisal have not yet been investigated systematically. She suggests that differences in the perception of control will determine either a threat or challenge appraisal. Lazarus and Folkman (1984) also suggest that challenge appraisals are more likely to occur when there is a sense of control. Lefcourt (1992) has a different view and maintains that those with an internal locus of control are more likely to be aware of the primary appraisal of threat,

than those with an external locus of control as they have more perception and awareness of the situation.

Control may also have an influence on secondary appraisal as the choice of coping strategies may be determined to some extent by the perception of control, for example, there may be more constraints when control is lacking. Folkman (1984) maintains that appraisals of the situation are part of secondary appraisal and refer to the possibilities for controlling a specific stressful encounter. Vitaliano, De Wolfe, Maiuro, Russo and Katon (1990) suggest that the degree of control a person perceives over the situation is related to how changeable the situation is considered to be. This suggests that the choice of strategies may be influenced by how much control can be exerted over changing the situation through using the coping strategies. Lefcourt (1992) states that control is particularly related to secondary appraisal as if individuals believe they have sufficient control over the situation to deal with it effectively then this will reduce their negative emotions. This suggestion also supports the notion of control influencing tertiary appraisal, as when coping strategies are perceived as more effective there may be more perceived control over a situation. Cozzarelli (1993) also links secondary and tertiary appraisal with control by suggesting that those who consider that they have personal control will have a wider repertoire of coping strategies and the use of the strategies will be more effective.

Control may influence the outcome of a stressful event. Folkman (1984) maintains that there are generalised beliefs about control which pertain to the degree individuals assume they can control outcomes of importance. Presumably this belief will influence the coping process. If a person believes he or she has some control over the outcome then the coping process is likely to be influenced in a more positive manner. Taylor (1990) maintains that those who have more control over a stressful episode appear to adapt more successfully than those without any feeling of control. Valentiner, Holahan, and Moos (1994) examined how control influenced coping strategies and outcome. They found that when the event was perceived as controllable, the coping strategies that were used had different consequences than if the event was perceived as uncontrollable.

In the present research control was considered a possible influencing appraisal on all aspects of the coping process. It is an important concept but its role is still speculative and confusing. Control is defined as *the belief in mastery over the stressful event*. It was not the intention to explore control in the same depth as the preceding constructs, rather to acknowledge its importance as an integral part of the coping process and to attempt to determine the influence it may have on the process, particularly to ascertain any influence on the outcome.

OUTCOME

Coping is generally viewed as the mediator between stressful events and outcomes (Folkman. Lazarus. Gruen & DeLongis. 1986). All stressful events have an outcome whether they are short term or long term. Lazarus and Folkman (1984) define outcome as "the effect a strategy has" (p. 149). They state that the way that appraisal and coping strategies affect outcomes is extremely important and that it is necessary to consider the factors that may be involved in a person's functioning once coping with a stressful event has changed or ended. Lazarus and Folkman state that there are three basic kinds of long-term outcome: social functioning, morale and somatic health. They consider that the three basic types of outcome have a parallel in short term outcomes. Social functioning parallels the effectiveness of dealing with the event, morale equates to the negative and positive emotions experienced during and after the event, and somatic health refers to the physiological changes produced by the event.

Edwards (1988) discusses the consequences of using coping strategies and maintains that the outcome is determined by changes in appraisal as the coping process proceeds. rather than by use of any given strategy. This statement is process-oriented and suggests that appraisal is more influential than the coping strategies in determining the outcome. Pearlin (1991) suggests that past research has discovered that people may deal with similar stressful events and have different outcomes and it is maintained that it is coping behaviour that makes the difference. This possibility can be investigated by including outcome in the coping process. There may be different influencing factors in the coping process for different outcomes.

As discussed previously, in the present research Lazarus and Folkman's functions of coping are considered to be connected to outcome. A resolution of the problem and/or a change in the emotional reactions are indicators that coping is no longer required. It is generally assumed that a measure of outcome is a decrease in the initial reactions that occurs when a stressful situation eventuates. According to Cameron and Meichenbaum (1982) stress no longer exists when there has been a return to what is considered a normal pattern of functioning and it can be assumed that coping has been effective.

In the present research *outcome is defined as the consequences of using appraisal and coping strategies during a stressful event and the indication that the need for coping has ended.* The outcome indicates the end of the coping process as it suggests that the stress is reduced and the event is no longer creating a need for coping behaviour, or it may be that the event itself has ended. At times it may be difficult to distinguish between tertiary appraisal and outcome as they will be closely linked in some events, especially when the event is ongoing and the endpoint is not obvious or unknown. For

example, if a person is dealing with a minor illness such as influenza, when the endpoint of the illness will occur will be unknown, and when the endpoint has occurred will be unclear. The person may use coping strategies to deal with the illness and perceive these strategies as effective, which is tertiary appraisal. The tertiary appraisal may be fused with an outcome if for instance, the person goes to sleep to reduce the stress of the illness. Some events will be time limited, so the outcome will be apparent. For example, a person dealing with the threat of going to the dentist may use coping strategies to reduce the stress during the anticipation period, and may perceive these as effective, so this perception is tertiary appraisal. However, the outcome occurs when the visit to the dentist is over, so the threat has gone and there is no longer any need for coping behaviour. The effectiveness or ineffectiveness of coping strategies is presumed to determine the outcome. In general it is expected that the perceived use of effective coping strategies will lead to a positive outcome, and ineffective strategies will lead to a negative outcome.

In the present research outcome was defined as the indication that the need for coping has ended. To measure an endpoint requires a baseline. One of the indications that people are under stress is when they become aware of their initial reactions to the stressor.

REACTIONS

As soon as a stressful event is encountered a person may experience emotional, physiological and cognitive changes. Awareness of these changes may be the first indication that an individual is under stress.

The role that emotions play is an important theoretical component of coping theory. Coping researchers view emotions as a result of how individuals appraise their ongoing transactions with the environment (Folkman & Lazarus, 1985; Lazarus, 1982). Lazarus (1982) acknowledges that the more recent hypotheses include the idea that coping strategies are crucial mediating processes in the stress emotions (e.g. anxiety, fear, anger), and there is a reciprocal relationship between coping strategies and affect. Folkman and Lazarus (1988) also maintain that coping strategies mediate emotion in stressful events. The strategies influence the emotional responses, and emotions will alter depending on the success of an individual to manage the stressful event. According to Lazarus (1977) emotions are not constant, but change over time, partly as a result of coping efforts. These statements highlight the reciprocal influence between the coping strategies and emotions and emphasise how they may influence the changing and evolving coping process.

Lazarus and Launier (1978) consider that efforts to control the emotions are extremely important aspects of coping. They maintain that people will be aroused emotionally if they consider they are in some sort of trouble. and these stress emotions are distressing and need to be reduced. These issues are open to debate. The emotions involved in a stressful event may not necessarily be disturbing. Other more positive emotions may also be involved. and if so. these may be useful indicators of outcome. Nevertheless. their statement summarises the role that emotions play in the initial reactions to stress.

Folkman and Lazarus's (1985) notion of emotion-focused coping strategies suggest that there may be a fusion between the strategies that involve emotions. and the emotions which are reactions. Stanton, Danoff-Burg, Cameron and Ellis (1994) maintain that any expression of emotions should not be considered as a coping strategy and therefore should not be included in any taxonomy of strategies. They state that there needs to be a clear distinction empirically between coping strategies, emotions and outcomes to avoid confounding. This is a relevant point when aspects of coping are researched as separate variables, but when coping is viewed as a process the way in which people cope is not a series of neatly-defined structured thoughts and behaviours. It is considered to be a flowing, changing and evolving experience in which the thoughts and actions constantly change and blend with each other.

Short-term physiological changes may include increased heart rate, sweating and shortness of breath. The study of physiological responses is a vast field of research on its own and is usually separate to the psychosocial perspective (Fleming. Baum. & Singer, 1984). How coping affects physiological reactions is not an aspect which is emphasised by Lazarus and Folkman (1984) in their model of coping, but physiological responses can be viewed as an indication of outcome. Assuming there are changes when a person appraises an event as stressful, then according to Cameron and Meichenbaum (1982), the return to normal physiological functioning suggests that stress no longer exists and this can be interpreted as a measure of coping effectiveness.

Lazarus' model of coping is largely a cognitive one and as such it concentrates at length on cognitive appraisal (primary, secondary, reappraisal), and on cognitive coping strategies as important mediators between stress and outcome. Folkman et al. (1979) suggest that a complex set of cognitive processes is activated when stress is encountered. These include the specific primary and secondary appraisals, but there may be other cognitive reactions. For example, there may be a change in concentration. or ruminations and/or unrealistic thoughts may be reported. The cognitive reactions are a specific reaction to the stress, rather than an evaluation of the situation as in appraisal. If these reactions change as the stressful event unfolds they may fuse with appraisal to influence the coping process. Taylor (1983) considers that cognitive adaptive efforts

alone may help a person to overcome stress. It appears important to consider cognitions a little more widely than Lazarus suggests. It may be that cognitive change as an immediate reaction to a stressful event is an important indicator of outcome. For example. if a person lacks concentration this may affect his or her appraisal processes and the outcome may not be so positive.

In the present research reactions are considered an important construct within the coping process and are defined as *the emotional, physiological and cognitive changes of which a person becomes aware at the first indication of a stressful event, and which alter as the stressful event evolves*. The role that emotional. physiological and cognitive reactions play in the coping process is important. particularly as a baseline measure. as any changes can be an indicator of the effectiveness or ineffectiveness of the coping strategies and the outcome. As is the case for the control appraisal. it was intended to place less emphasis on reactions that on primary. secondary and tertiary appraisal. coping strategies and outcome. but to acknowledge and examine their role in the coping process.

SUMMARY

To restate. in the present research the coping process is defined as *how people experience changing efforts to manage stressful encounters, which are continually appraised over time, until evaluation of the effectiveness of the efforts alters the stress and influences the outcome.*

The present chapter has conceptualised the coping process as involving several specific constructs. These constructs are not separate but flow reciprocally to create the changes in the coping process and influence the way people deal with a stressful event. Figure 1 shows how the reciprocal flow between the constructs in the coping process is conceptualised. When a stressful event is encountered there will be some initial emotional. physiological and cognitive reactions which may interact with perception of the amount of control over the event. An appraisal process then eventuates: primary appraisal, where a person considers how he or she perceives the situation, and evaluates whether the event is harmful, threatening or challenging; secondary appraisal, where a person evaluates the potential coping strategies. There is a reciprocal flow between all these appraisals which also interact with the coping strategies that are used. Through a process of tertiary appraisal the effectiveness of these strategies is evaluated. If the coping efforts are effective there will be a positive outcome. If they are ineffective there may be a negative outcome, or the situation may be reappraised and further options will be evaluated to determine which part(s) of the process will be repeated.

COPING PROCESS

PRIMARY APPRAISAL

reactions — control — SECONDARY APPRAISAL — COPING STRATEGIES

OUTCOME

TERTIARY APPRAISAL

OVER TIME
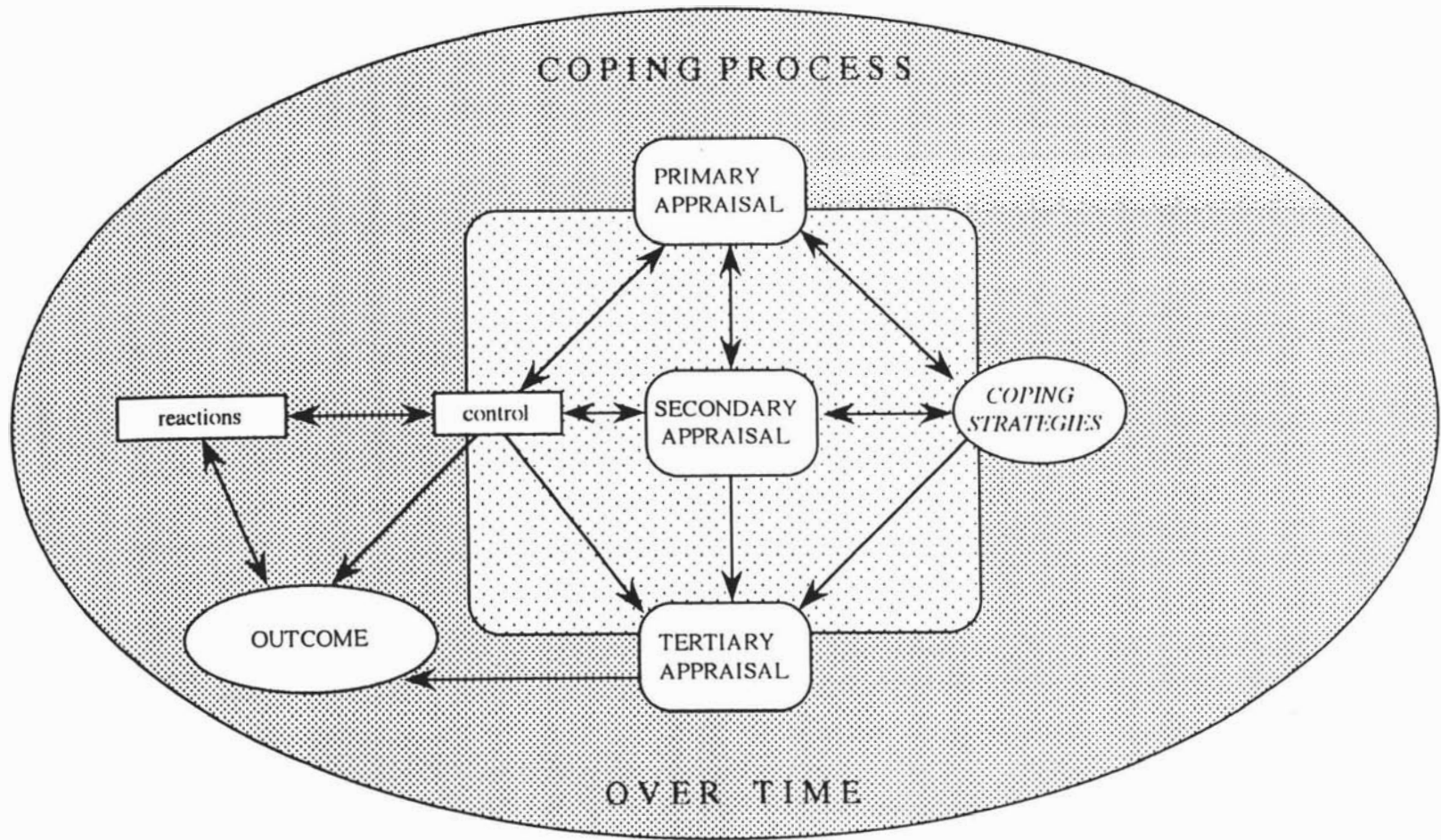
FIGURE 1: Diagram showing how the reciprocal flow between the constructs of the coping process is conceptualised

Lazarus and Folkman's (1984) model offers a sound basis for the coping process to be viewed as flowing, changing and multi-faceted. However, their insistence that process and outcome be kept separate has led to a focus on process to the exclusion of considering the effectiveness of the coping strategies and the outcome of the event. The present research focused on the experiences of coping from the time a person is faced with a stressful event until the stress has been altered or managed in some way.

More emphasis needs to be placed on the appraisal process and the role that it plays in the coping process. Lazarus and Folkman's (1984) concept of primary appraisal is well defined, but the influence that it has on the coping process is not clear. The understanding of secondary appraisal is limited and more emphasis needs to be placed on ascertaining the determinants of this construct so that knowledge of how and why people choose their coping strategies can be gained. The appraisal concept was extended to include tertiary appraisal, which is the evaluation of the perceived effectiveness of the coping strategies. This reduced the complexity of secondary appraisal and introduced the notion of effectiveness into the coping process. Primary, secondary, and tertiary appraisal. coping strategies and outcome are the key concepts of the theoretical framework in the present research, and the coping process also includes the perception of control and emotional, physical and cognitive reactions.

The aim of the present research was to capture the complexity of the coping process by examining it as a multi-faceted, flowing, changing phenomenon. To achieve the aim the preceding discussion clarified the conceptual framework and identified areas where the understanding of the coping process is limited. The investigation of coping as a process requires a methodology which corresponds to the theory, and an assessment tool which gathers information on the reality of the experiences reported when people are dealing with a stressful event. A major challenge facing researchers is to determine adequate measures for coping and there have been many taxonomies developed for assessing coping strategies, but the other aspects of the coping process have essentially been ignored for measurement purposes. Chapter three provides a discussion and critique on the measurement of coping, and presents an alternative methodology to assess the coping process.

CHAPTER THREE:

MEASUREMENT OF COPING

One of the major problems facing researchers is to determine a way to measure aspects of coping behaviour (Latack. 1986), and ascertaining the most appropriate way has been a continual problem for researchers in the area. There is general agreement that there is no accepted or adequate measure available (Amirkhan. 1990; Folkman. 1982; McCrae. 1984). When the measurement of coping is discussed it inevitably refers to the ways that coping strategies are classified. Lazarus and Folkman (1984) consider that appraisal and coping strategies are equal mediators in the coping process, yet there is little emphasis placed on the measurement of appraisal or other aspects of coping which contribute to the multi-faceted changing process. Dewe (1989) suggests that new measures and alternative methodologies which consider the dynamic process of coping need to be developed. The present chapter describes current assessment and methodology and discusses the need for an alternative framework to assess the entire coping process.

COPING STRATEGIES

Lazarus and Launier (1978) state that the lack of an adequate classification has impeded the study of the coping process. Since that time many attempts have been made to define and measure coping strategies. Aldwin and Revenson (1987) noted that more than 20 measures of coping strategies had been published in the preceding 10 years. More have been developed since, for example, Carver, Scheier and Weintraub (1989); Dewe and Guest (1990); Endler and Parker (1990). This rapid production of new measures may be improving the measurement of coping strategies, but it may also be exacerbating the confusion in the literature by continuing to focus on the same issue rather than seeking alternatives such as addressing the other aspects of the coping process.

McCrae and Costa (1986) describe how theorists differ considerably in the number of coping strategies they propose. from global dichotomies to attempts at finer distinctions. Holahan and Moos (1987) suggest that most approaches distinguish between active strategies which are directed toward confronting the problem, and strategies which endeavour to reduce tension by attempting to avoid the problem. Matheny, Aycock, Pugh, Curlette & Cannella (1986) maintain that there is no agreement on what makes up a complete set of coping strategies. There appears to be an infinite number of coping strategies available and determining which ones to include is not an easy task.

Categorisation of coping strategies creates rigidity as people can respond only within the boundaries allowed, and some potential strategies may be deleted. For example, Folkman and Lazarus (1985) added prayer as an item to their revised version of the Ways of Coping Checklist at the suggestion of previous subjects, and it is possible that other potentially effective items may have also been excluded. They maintain that they carried out the deletion of items conservatively in case they omitted items which appeared inappropriate for some people but that may be useful for others. This is a concern when weak items are deleted during scale refinement. With any deletion there is a danger that important information may be gone and it restricts the choices for a participant. Maybe the deleted strategy is a very effective one for a few people, but the opportunity to evaluate this has gone.

Roskies and Lazarus (1980) consider that a method for classifying strategies is essential for the systematic study of coping. It seems that most researchers agree as the majority of the research has concentrated on finding or using a psychometrically sound instrument for measuring coping strategies. The existing measures emphasise different strategies and categorisations, and while researchers may not agree that any one measure is acceptable there are several which are adequate for what they examine, i.e. the coping strategies that people use. Traditional psychometrics definitely have a role in the measurement of coping behaviour. For example, Folkman and Lazarus' (1985) revision of the Ways of Coping Checklist is a soundly developed instrument consisting of two categories (problem-focused and emotion-focused), both including cognitive and behavioural strategies. They used five ways to determine internal consistency and achieved high reliability. This instrument has potential for measuring coping strategies but it is rigid as it allows for a limited number of responses. Folkman and Lazarus state that it may not have the potential to identify other styles of coping and they maintain that it is necessary to capture ways that coping responses change throughout an encounter. They admit that their own measure does not describe the order in which coping strategies are used or how they alter in relation to changes in the person-environment relationship. Stone et al. (1991) examined some of the issues involved with taxonomies of coping strategies and used the Ways of Coping Checklist as a focus for their investigation. They found that many of the coping strategies did not apply to some kinds of stressful situations and that the participants appeared to respond to the checklist inconsistently and inappropriately. They maintain that coping checklists may not be valid and the interpretation of results is confusing. These findings suggest that alternative methods of assessing coping strategies need to be attempted.

There have been some questions raised about psychometric properties of coping strategy scales and the conceptual basis for their development (Aldwin & Revenson,

1987; McCrae & Costa, 1986; Stone, Kennedy-Moore, Newman, Greenberg & Neale, 1992; Stone and Shiffman, 1992). Moos and Billings (1982) maintain that "researchers should recognise that psychometric procedures such as internal consistency and factor-analytic techniques may have only limited usefulness in evaluating the adequacy of measures of coping "(p. 225). The use of psychometric procedures seems inconsistent with the theoretical assumptions. If coping is a changing phenomenon then establishing reliability, for example, does not seem appropriate.

Stone and Neale (1984) discuss some of the difficulties involved with psychometric properties of coping strategy scales. They began with the intention of developing an assessment based on traditional psychometric principles but concluded that a checklist methodology was not appropriate for the measurement of coping strategies as the internal consistency data was unacceptable. Their trial of using a sorting method showed that items could mean different things to different people. They strongly criticised the apparent internal reliability success of traditional scales. They suggested that internal consistency may not be relevant with scales such as those used for coping for three reasons.

First, Stone and Neale (1984) maintain that averaging over several measures reduces measurement error and so increases alphas. They suggest that if Folkman and Lazarus (1985) assessed the reliability of their instrument on a single occasion rather than many, the alphas may not be so high. This seems a valid point and may well account for the difference in alphas between Folkman and Lazarus' scale and Stone and Neale's measure. Folkman and Lazarus maintain that by repeatedly sampling a subject's coping strategies they theoretically increased the reliability. They see this as positive and presumably have not considered the possibility that this may distort internal consistencies.

Second, Stone and Neale maintain that most researchers rely on retrospective data (e.g. the most stressful event that happened in the last month). They maintain that Folkman and Lazarus condensed coping over time, i.e. participants responded to an event that may have happened several days or even weeks previously and described how they coped with it from the time the episode began to the time they answered the questionnaire. If participants used more than one strategy over this period then more items would be checked and this would increase internal consistencies. This is also a valid point, and this method does not allow for determining how many strategies subjects may have used, the sequence in which they were used or when a change in a strategy may have occurred.

Third, Stone and Neale maintain that summarising over time does not show which types of coping strategies were used in the distinct phases of coping that may occur over a period of time. They maintain that distinct modes of coping could not be detected from those that were combined. This is an important point. If the process of coping is to be determined then measures must be able to detect the changes in the different strategies used. The dynamic process of coping cannot be adequately measured by a statistic which relies on each item being aligned with one scale, as this is not appropriate if people do give items different meanings. As multiple items are needed to index a single category this does not allow for sufficient flexibility to treat each item as a separate entity, which may be more appropriate in a changing process.

Most current validated measures focus on the development of the assessment of strategies without sufficient attention to their role and relationship to other variables within the process of coping. Folkman and Lazarus (1985) suggest that assessment procedures will be incomplete until the dynamic quality of coping can be described. If this is to be achieved then there needs to be simultaneous measurement of several possible changing aspects so that the reality of people's experience of coping with a stressful event is monitored. Research has progressed over recent years so there is now abundant knowledge of what people do to cope with stressful events. However, research may not advance much further as long as the emphasis is on measuring the coping strategies rather than the coping process. There is a vast difference between these two aspects. Until an adequate method is found to measure how, when and why people activate their coping behaviour (i.e. the process) knowledge will not progress past what is attempted in coping behaviour (i.e. the strategies).

Leventhal and Nerenz (1985) suggest that people do more mundane things than the scales show. This is a pertinent comment and Stone and Neale (1984) have attempted to overcome this problem. They developed an open-ended questionnaire consisting of one sentence descriptions of eight strategies which allowed participants to detail their actual thoughts and actions. Stone and Neale presented an innovative, open-ended approach which has the potential to be extended into a measure which could collect more detailed information about the dynamic process of coping behaviour. The present research used Stone and Neale's notion of an open-ended format to ascertain the participants' actual thoughts and actions in their use of coping strategies. Coping strategies are a pivotal aspect of coping behaviour so the measurement is important. The intention of the present research was to place the use of strategies within the coping process to ascertain their role and influence in how people cope with stress.

APPRAISAL

Taylor and Scogin (1992) state that the measures that exist for appraisal have not been established psychometrically as there is no reported validity or reliability. There appear to have been very few attempts to measure the appraisal aspects of coping behaviour, and while these measures may not be established psychometrically the research that has used them has contributed to the knowledge of coping behaviour.

Primary appraisal

Folkman, Lazarus, Dunkel-Schetter, DeLongis and Gruen (1986) developed a scale for primary appraisal which assessed the physical, psychological, social, financial and occupational stakes. This consisted of 13 items divided into subscales: when self-esteem was at stake (6 items); when there was concern for a loved one's well-being (3 items); and the remainder were individual stakes (not achieving an important goal, harm to health, safety or physical well-being, strain on financial resources, losing respect for someone else). This scale attempts to measure the determinants of primary appraisal but does not assess harm/loss, threat or challenge. Few of the studies which have investigated these primary appraisals have attempted to measure the appraisal directly. Generally the appraisals are categorised into harm/loss, threat or challenge (e.g. Bjorck & Cohen, 1993; Ptacek et al., 1992). In McCrae's studies (1982, 1984; McCrae & Costa, 1986) the researchers classified the events into the three appraisals. But as McCrae (1984) pointed out this did not acknowledge the subjective appraisals by individuals, so in his second study, participants classified their own events into the three appraisals.

Folkman and Lazarus (1985) and Carver and Sheier's (1994) replication, measured threat and challenge emotions, but made assumptions about the threat and challenge appraisals and did not assess them directly. Foster (1988) made a more direct assessment by requesting subjects to rate the extent of a threat and challenge appraisal on a seven-point scale.

The main problem with the measurement of primary appraisal is the reliance on a retrospective classification of events, rather than an assessment of the actual perception of the stressor. The changes in the perception of the situation also need to be included if the dynamic process of coping is to be examined. The present research attempted to include these notions in the measurement of primary appraisal to ascertain how primary appraisal influenced, or is influenced by, the coping process.

Secondary appraisal

The only known available measure of secondary appraisal was first used by Folkman and Lazarus (1980). They maintain that it describes coping options but it uses four questions which ask solely about the situation: was the situation one which could be changed or had to be accepted, was more information needed or was there something that one was prevented from doing. This is not an adequate measure theoretically as there is a failure to include the evaluation of coping strategies and this appears to be inconsistent with the theoretical issues. Folkman. Schaefer and Lazarus (1979) state that secondary appraisal focuses on the evaluation of the availability of suitable coping strategies and that the major influences which determine secondary appraisal include previous experience with such situations. generalised beliefs about oneself and the environment, and the availability of resources. These aspects were defined in chapter two and they provide a more substantial basis for measuring secondary appraisal. A measure based on these aspects would lead to better understanding of the fundamental issues, and is more consistent with the model than Folkman and Lazarus's (1980) measure which focuses on the appraisal of the situation.

Lazarus and Folkman (1984) do acknowledge that more accurate measures of secondary appraisal need to be developed. Coyne and Lazarus (1980) suggest that secondary appraisal processes are likely to be very complex as an individual will need to simultaneously consider several options and these choices are unlikely to be definitive. An adequate assessment needs to attempt to capture the cognitive nature of secondary appraisal and to ascertain the function the appraisal serves. In the present research the assessment of secondary appraisal was based on the supposition that the function is to evaluate the options for the coping strategies that are used, and that these are influenced by the repertoire, history, constraints and awareness that the participants report.

Tertiary appraisal

The measurement of the effectiveness of coping strategies, or tertiary appraisal, has not received much attention in the literature. Menaghan (1982) asks what criteria are appropriate for deciding whether or not a give strategy is effective and she suggests that a decrease in subjective distress may be important. Menaghan (1983) provides a discussion of the complexities of assessing the effectiveness of coping strategies and maintains there is a wide variation on how effectiveness is measured, such as perceived effectiveness or observed effectiveness. She maintains that a recurring problem is the failure to assess usage and perceived effectiveness separately, so there is no way of knowing whether perceived ineffective strategies were tried and found lacking, were

avoided, or were used despite their perceived ineffectiveness. McCrae and Costa (1986) examined the frequency of use of coping strategies and suggested that there is some evidence that use and perceived effectiveness are separable. Some coping strategies are used but rarely thought useful. The failure to assess usage and perceived effectiveness separately is evident in much of the literature that has investigated effectiveness.

Few researchers seem to be aware of the need to distinguish between usage and effectiveness. A serious error that occurs in some research is that it is maintained that effectiveness is being investigated, when on closer examination it is actually usage that has been assessed, without any acknowledgement that there may be a difference between the two. For example, Mattlin, Wethington, and Kessler (1990) maintain they produced evidence concerning the effectiveness of coping strategies and the situation in which they were used. An examination of their article reveals that only the extent to which strategies were used was measured, and the authors equated use and effectiveness. Effectiveness can be inferred by their results, but this does not provide a satisfactory basis to examine the role that tertiary appraisal plays in the coping process. It is possible that the strategies that are used most frequently are also those which are perceived as the most effective, but there needs to be a definite distinction between use and effectiveness so issues such as this can be explored. When investigating the coping process it is essential to separate usage and effectiveness, and the inclusion of tertiary appraisal as a specific construct will assist this, as effectiveness and ineffectiveness can be examined separately from the use of strategies. The present research explored the influences between tertiary appraisal and the coping process by assessing perceived effectiveness separately to usage, measuring the extent of the perception quantitatively, and determining how the participants knew that the strategies they had used were effective.

There has been little attempt to assess appraisal and this has led to little information about this cognitive aspect of the coping process. Ptaceck et al. (1992) make one of the few attempts to assess appraisal more directly using ratings of the level of stressfulness of the event, the controllability of the event, and by requesting subjects to state whether the stressful situation was perceived as a loss, threat or challenge. They also assessed use and effectiveness separately by requesting subjects to rate the extent to which they used seven specific strategies and then requested them to rate the effectiveness of these on another scale. Their rationale for including these constructs was to access information that is not found by using traditional checklists. They suggest that some fundamental issues of coping can be identified through the method of assessing appraisals directly. Their study provides an example of the importance and possibility for researchers to find alternative methods to assess coping behaviour. However, they

assessed the constructs separately and did not attempt to examine how they inter-related. As long as researchers insist on investigating aspects of the coping process separately in a quantitative manner there will never be sufficient information on the reality of the experience of coping.

Lazarus and Folkman (1984) state that researchers have found the measurement of appraisal-like processes very difficult. Two reasons could be suggested for this difficulty. First, the insistence on using traditional psychometrics rather than attempting to find an alternative way of measuring coping as a process, which leads to the second reason: the reliance on quantitative measurement rather than using alternative methodology.

METHODOLOGICAL ISSUES

The preceding discussion suggested that the problems with the measurement of coping behaviour are largely because of the reliance on using psychometric procedures for assessing coping strategies. There have been questions raised about the efficacy of checklists to assess coping behaviour as they do not capture the complexity of the coping process over time, nor do they ascertain adequate information about the meaning people give to their coping behaviour.

Folkman and Lazarus (1985) found that there were individual differences involved in a stressful encounter. They concluded that coping is a multi-faceted, dynamic process as people cope in complex ways and can experience seemingly contradictory states at any given time in a stressful encounter. If these findings are accepted and coping is viewed as a process, then traditional methodologies cannot adequately measure this phenomenon. At best the methodology that is currently used in the coping literature can assess the different aspects of the process but not the changes and reciprocal flow between the constructs. They can assess *what* people do to cope with stress, but not *how* or *why* they do what they do.

To advance knowledge within the area of coping research and specifically the coping process requires different methodology. As Stone, Kennedy-Moore, Newman Greenberg & Neale (1992) maintain, it is time to address methodological issues rather than persisting with current assessment methods. Lazarus and Folkman (1984) describe how the emphasis changed from the traditional antecedent-consequent model using variables in a unidirectional and linear manner to an ipsative-normative and naturalistic design more suited to their transactional model of coping. They maintain the design allows for both intra and inter-individual comparisons which enables more issues to be examined. The intra-individual research has extended knowledge but suffers from the

disadvantages of psychometric measures as discussed earlier, and is still not adequate for the transactional perspective. There is no doubt that this shift in research design advanced knowledge in the area but it does not appear that researchers have considered the possibility of another change so that the fundamental issues can be addressed in a more flexible and in-depth manner.

There is a developing disquiet about what quantitative methods are achieving (Van Maanen, 1983) and a suggestion that this perspective has at times been used when it was not the most appropriate methodology (Cook & Reichardt. 1979). According to Hersen and Barlow (1976) emphasis on the study of individuals in psychology lapsed when the group comparison approach was introduced. This focus on averages and inter-subject variability became so entrenched that those who studied the individual were considered radical. Although these comments were made more than ten years ago it appears that this reliance on quantitative methods still persists within the area of research into coping behaviour. Continued persistence in using these quantitative approaches may hinder progress and limit the opportunities to capture rich and complex data offered by alternative methodologies.

Lather (1986) discusses the importance of developing new methods of research which will be interactive and achievable so that theories are advanced. Dewe (1989) maintains that the traditional methods used to research the transactional perspective have not been disputed generally and this acceptance of quantitative methodology has led to an empirical distinction between appraisal and coping strategies. He suggests that future research must investigate alternative assessments that match the theoretical issues.

The accepted alternative to the quantitative paradigm is qualitative methodology. Reichardt and Cook (1979) provide a summary of the different attributes of the quantitative and qualitative perspectives. They describe the quantitative paradigm as logical-positivistic, objective, particularistic, hypothetico-deductive, outcome-oriented, using obtrusive and controlled measurement which produces reliable, hard and replicable data, and assumes a stable reality. In contrast, the qualitative perspective is phenomenological, subjective, holistic, inductive, process-oriented, using naturalistic observation which produces valid, real, rich and deep data, and it assumes a dynamic reality. Examination of this summary suggests that the study of coping as a process is very suited to the qualitative paradigm as it has the potential to investigate the dynamic aspects in a more flexible and interactive manner and therefore may provide a partial solution to an alternative methodology. Qualitative data offers a method of investigating intention and meaning (Sutherland, 1992) and this has the potential to access the nature of the coping process in a more detailed manner.

However, pure qualitative methodology is not necessarily the framework that is best suited to the coping process. Miles and Huberman (1984) state that most qualitative research lies between the extremes of pre-structured, tight approaches and loose, emergent, inductive designs. Morgan and Smircich (1980) consider that there are a range of possible approaches to qualitative research and that it is the nature of the phenomena being studied which determines the research techniques rather than the methodology. These statements suggest that the nature of the coping process needs to determine the most appropriate methodology. In the present research the design was structured to meet the conceptualisation of the coping process.

Pearlin (1991) maintains that the best methods to research into coping have not yet been found, and, as Harré (1978) states, any research design has an element of risk. A methodology with qualitative aspects is a possible alternative to gain additional knowledge, as it offers a more flexible and open method of gathering a participants's thoughts and feelings and focuses mostly on the actual words of the participants rather than assigning only numerical values and dealing with averages.

There are valid criticisms of focusing on the words of the participants, one of the problems being reliance on subjective data. However, Lazarus and Folkman (1984) maintain that there are advantages to using subjective reports. The main one is that people are very capable of using language to reveal rich patterns of thoughts and feelings and this ultimately will glean more information about coping than any other source of data. Lazarus and Folkman further suggest that persistence in careful use of purely self-report data is preferable. Since much of the model of coping as a process is cognitive, dependence on subjective data is inevitable.

Lazarus, Averill and Opton (1974) maintain that only some aspects of coping can be assessed with subjective reports, for example, thought processes can be requested for problem-solving type aspects, but not defensive forms of coping (e.g. denial, repression). Coping is perhaps something that most people take for granted and do not necessarily stop to think about what they are doing. This raises implications for the ability of potential participants to respond consciously and appropriately to questions concerning their coping behaviour. Oppenheim (1968) suggests that as long as a person has understood a question then some process of awareness will take place. There are difficulties involved in trying to measure cognitive processes of which people are not aware but hopefully most will be able to recognise such processes have occurred when a cue is given. Coping as a process can be measured to the level of a person's awareness of what they do and this will vary from one person to another. Some participants will have more self-awareness than others and if data is obtained on an individual basis this will add to existing knowledge.

A paradigm with qualitative aspects is appropriate for the coping process as it can provide a framework for idiographic research which will address the temporal issues, monitor the changes in the process and explore the reciprocal flow between the appraisals, coping strategies and outcome in a flexible manner, using words rather than numbers. However, it provides only a partial solution. Silverman (1989) maintains that it is now becoming clearer that quantitative methodology is becoming more than merely statistics as it is addressing the contexts that surround the data that is collected. The context of coping behaviour can be examined by analysing the participants' words they use to describe their thoughts, feelings and actions, and these can be enhanced by the use of statistics to provide a more comprehensive understanding of individuals experiences of coping with stress.

AN ALTERNATIVE FRAMEWORK

Morgan and Smircich (1980) consider that the qualitative and quantitative approaches do not have to be viewed as a dichotomy, and that there has been too much emphasis on arguing for different methods rather than investigating the best method to explore the relationship between theory and method. When this is related to coping theory it identifies the need for a methodology which suits the theory of the coping process rather than attempting to define and investigate the coping process to suit the traditional methodology, whether that be qualitative or quantitative.

Reichardt and Cook (1979) suggest that the differences between qualitative and quantitative paradigms are not necessarily as rigid as they appear and that there is no need for researchers to choose between them, but that they can be used together. Marshall and Rossman (1989) suggest that the choice of quantitative and/or qualitative data is ascertained by the decisions made to determine the most appropriate approach to the research questions, rather than allowing the type of data to dictate the methodology. So aspects of both qualitative and quantitative can make a contribution, and the focus in the present research was to attempt the most appropriate alternative methodology which may offer different descriptions and explanations of the changing coping process. This was achieved by designating the subjective data collection and analysis techniques as having both qualitative and quantitative aspects. The qualitative aspect offered a more detailed description and explanation of the coping process. The main analysis technique used was content analysis to measure how often the participants reported similar experiences of coping and to ascertain the themes that were evident from the participants' comments (McBurney, 1994). The quantitative techniques and analysis provided descriptive statistics and a method of assessing the changing nature of the coping process. The focus was on changes that occurred as the process unfolded, so

quantitative data, obtained by methods such as such as visual analogue scales, provided a quick, sensitive repeated measure along a predetermined dimension.

Chapter two presented the conceptual framework for the present research. This framework can produce a reasonably tight prestructured approach to allow specific assessment of the identified constructs of the coping process, to add structure to the data and to analyse the interaction between the appraisals, coping strategies, reactions and outcome. The conceptual framework and the alternative methodological framework provided a structured approach which allowed the design of the research to meet the definitions of the coping process.

The methodological framework suggests that the unit of analysis for the experience of coping needs to alter so that the theoretical assumptions can be examined in a more appropriate way. Coyne and Lazarus (1980) maintain that much of the difficulty in researching coping stems from using "rigid structural concepts." They state that the unit of analysis has to change to capture processes differently to what was then focus on trait measures. Yet fifteen years later, researchers still use the rigid research methods and attempt to make the theory fit these approaches. The unit of analysis has to be able to capture the coping process and adapt to the theory.

The present research focused on analysing the coping process at both the group level and at the individual level. Nachmias and Nachmias (1987) state that it is not always possible to draw the same conclusions from different levels of analysis. Research into coping has generally been conducted at the nomothetic level and the knowledge and understanding of what people do to cope with stress has been based on aggregated data. The analysis of the data at the group level in the present study allowed a comparison with previous research to ascertain similarities and differences between the methodologies. The methodological framework was also designed so that the unit of analysis could change to examining the coping process at the individual level. Erlandson, Harris, Skipper, & Allen (1993) maintain that a case study approach is the best method to reconstruct people's experiences and that this increases the level of understanding of the phenomena being investigated. The present research intended to capture the participants' experiences of coping in a more comprehensive manner than that conducted by previous researchers. A case study approach provided the unit of analysis to achieve this purpose by using individual data to help explore the coping process and explain the meaning and intention of the coping experience for individuals as a stressful event evolved.

The aim of the present research was to capture the complexity of the coping process and to explore the way people experience the changes that occur over time as a stressful

event evolves. The methodological framework described is a departure from traditional methods of research in the area of coping behaviour in an attempt to achieve the aim and to explore the feasibility of the alternative framework. Much of the current literature focuses on using stressful daily events as the basis for investigating coping behaviour. Hence, the first study in the present research also used stressful daily events to explore the coping process and to ascertain whether or not an alternative methodology provided a better understanding of coping behaviour, and additional knowledge on coping as a process.

CHAPTER FOUR:

DAILY EVENTS STUDY: AIMS AND METHOD

The aim of the present study was to capture and examine the dynamic nature of the coping process using discrete daily events. This was achieved by exploring the interaction between appraisal, coping strategies and outcome, examining the factors which influenced the changes in the coping process as a stressful event unfolded, and ascertaining any general pattern(s) of the coping process that emerged from the data.

DAILY STRESSFUL EVENTS

In most studies of coping behaviour a stressful event is described for the purposes of data collection. Traditionally, retrospective accounts of a situation-specific single stressful life event have been used and these have provided limited information as they do not allow for assessing coping over time (Ptacek et al., 1992). Stone and Neale (1984) consider that assessing coping on a daily basis is important so that the dynamic process can be captured as it changes over time, and so that a more in-depth assessment can be conducted. Capsi, Bolger and Eckenrode (1987) maintain that the usual approach to analysing daily events data is to sum the data over several days. While they consider that this is an improvement on averaging data in major life events it still does not assess the dynamic nature of coping. They used a time series design to examine daily stressful events and they found that this type of data analysis has potential for assessing the coping process over time.

There is now a trend toward investigating coping behaviour on a daily level (e.g. Bolger, DeLongis, Kessler and Schilling, 1989; Ptacek, 1992; Stone & Shiffman, 1992). Brantley, Waggoner, Jones and Rappaport (1987) maintain that the events that occur on a daily basis are not as stressful as crisis type events, but the stressor does not need to be extremely stressful to examine the coping process. Although the coping process may change with the intensity of the perceived stress, as long as individuals are dealing with a stressful experience then it is the way that they cope with it that is important, not necessarily the degree of stress. As Capsi et al. (1987) state, it may be the investigation of the day to day stressful experiences which will add to the existing knowledge of coping behaviour. Daily events have the advantage that they can be assessed close to the time they occur, rather than retrospectively. This allows the participants the opportunity to recall the complex aspects of the coping process more readily.

Stone and Shiffman (1992) maintain that the simplest method of using daily events is to ask participants to describe the most stressful event of the day. Participants in the present study were asked to nominate and describe the most stressful event of the day, every day for a two or three week period (the length of time was altered from three to two weeks half way through the data collection). The daily event was used as a focus to monitor the coping process across different events.

METHOD

Participants

Recruitment was achieved by the researcher asking people known to her if they knew of suitable potential participants who had a perceived current lifestyle which generated reasonable ongoing stress. A letter (see Appendix A)was then given to potential participants through the contact person who forwarded the name to the researcher if they were willing to participate. This recruitment process resulted in ten participants, four males and six females. The age range was 25 to 70 years, with a mean age of 41 years and median of 38.5 years. Eight of the participants were employed by different large organisations. The remaining two were caring for people who were dependent on them.

Measures

A questionnaire, (the Daily Record, see Appendix B) was developed to meet the aim of the present study by creating questions which would gather information in a way that allowed the participants' reports of their coping experienced to be sequenced so that the coping process could be examined. The intention was to develop a questionnaire which provided subjective data to be analysed qualitatively and quantitatively.

The Daily Record

The questions in the Daily Record were developed to gather information on the coping process (appraisals, coping strategies, reactions and outcome) previously discussed. In keeping with tradition in coping research the word 'coping' did not appear on the questionnaire or other information provided to prevent bias and to avoid the notion that effectiveness is implicit in the concept of coping.

Visual analogue scales (Aitken, 1969) were used as a quantitative measure of the participants' perceptions. The scales consisted of 100 millimetre lines with stops at either end and an appropriate adjective beyond these stops (Huskisson, 1983). Visual

analogue scales were chosen as a quick sensitive measure of change to allow a quantitative comparison between events and/or participants.

The following is a summary which addresses three issues concerning the questionnaire. First, it is a summary of the questions included in the Daily Record which were intended to gather the data on the coping process. Second. it is a summary of the questions that were intended to help the participants create some context and meaning for their coping behaviour. Third. it documents some changes made to the Daily Record at the mid-point of the data collection. It became clear that the questions for some of the constructs were providing responses which made it more difficult to ascertain their role within the coping process as limited information was being gathered. The changes were made to improve the amount and quality of the data.

The stressful event: The participants were asked to describe the most difficult problem of the day, on every day of a two week period. Participants also indicated on visual analogue scales how stressful they found the event. A contextual question involved the participants indicating on visual analogue scales how much they thought the problem affected their ability to get on with daily life.

Few stressful encounters occur in isolation. Most people may have more than one stressful incident in one day or something that has happened previously is having to be dealt with therefore affecting the latest stress in some way. So there is a constant interaction between previous, present, and future problems. To help the participants focus more specifically on the context of the event they were recording they were asked if they had any *other* problems which happened that day and if they had any *previous* problems which were being dealt with that day.

Coping strategies: Some questions focused on asking the participant to think about all the coping strategies they used, and others asked them to consider one only. Considering all the strategies together provided a more comprehensive perspective and was necessary for some constructs, for example secondary appraisal, to ascertain how all the coping strategies were chosen or used. However, it was considered easier for the participants to think about only one coping strategy at a time as well, so that a more specific focus was provided and more detail could be given. The participants were asked to nominate one specific strategy.

An open-ended checklist format was used for the participants to record which coping strategies they used for each event. For the purposes of brevity in a daily measure it was necessary to limit the number of strategies in the checklist. It was intended to provide the opportunity for participants to state exactly what they thought and did when using

the coping strategies. The open-ended format developed by Stone and Neale (1984) has the potential to achieve this goal. but their instrument deliberately excludes some methods of coping (e.g. defense mechanisms). McCrae (1984) developed a scale which consisted of a larger number of discrete coping strategies. including the defense mechanisms that Stone and Neale excluded. This offers a wider range of strategies but is too large for them all to be included in a daily measure. McCrae's measure of coping strategies was selected and 14 of the 28 possible scales were used. These were: rational action; seeking help; hostile reaction: fatalism: emotional response; positive thinking: distraction; intellectual denial: relaxation: wishful thinking: humour: blame: faith and self-adaptation. The categories chosen were defined clearly so participants could add their specific thoughts and actions. as suggested by Stone and Neale. They were also those strategies that were expected to have the most relevance to daily events and would be the clearest to document. There was one more strategy included as 'other' to allow participants the opportunity to record anything else they may have used.

To ascertain any changes that occurred within the use of coping strategies participants were asked if they were aware of changing from one strategy to another. and if so. to describe how this occurred. In studies where checklists of coping strategies have been used most participants check several items for dealing with the same event. It was assumed some coping strategies may be used together but others would be used separately. so the participants were asked which strategies were used together.

A change was made at the mid-point of the data collection to increase the information on the use of coping strategies. It was decided that it may be possible for the participants to place their use of coping strategies in order so a more exact sequence could be obtained. So an additional question requested the participants to list the strategies in the order they were used.

Primary Appraisal: Questions were asked so that the events could be categorised into harm/loss, threat and challenge appraisals. The main distinction between harm and threat is time (Holroyd & Lazarus, 1982), so to gain an accurate gauge of this a question was asked to determine whether or not the event had occurred. The question to ascertain the distinction between threat and challenge was intended to clarify a negative versus a positive tone (Coyne & Lazarus, 1980). To ascertain whether or not there was a change in primary appraisal part way through the coping process, participants were asked if the way they viewed the problem altered at all at any stage, and if so, how did this change?

Secondary Appraisal: The questions for secondary appraisal were focused on the four main areas of repertoire. history, constraints, and awareness.

Repertoire **:** Participants were asked whether or not they had a wide range of methods they could use. If the response was negative they were asked why they thought this was the case, to determine how the limited choice had occurred. They were also asked where they thought they learned the coping strategies they used to determine how individuals build up their repertoire.

History: Participants were asked whether or not the particular problem had occurred before, and if they responded in the affirmative they were asked whether similar methods were used to deal with it then.

Constraints: Participants were asked if there was another strategy they would have preferred to use, what it was and what prevented them from using it, to ascertain whether or not they used the strategies that they preferred.

Awareness: The participants were asked whether or not they had thought about which coping strategies they would use as an attempt to determine which strategies were chosen consciously and which ones were automatic and habitual.

Tertiary Appraisal: To determine tertiary appraisal the following questions were included, based on one specific strategy which the participants were asked to choose from those they had used:

a) Was the coping strategy used effective? A direct question enabled the participants to evaluate the effectiveness in their own terms and begin to think about how they determined it.

b) How effective was it? This was indicated by a visual analogue scale to provide a measure of comparison.

c) How did they know the coping strategy had been effective?

The data on tertiary appraisal was collected only on one specific strategy and this did not provide adequate information about all the coping strategies used in any given event, especially the distinction between effective and ineffective strategies. This was improved at the mid-point of the data collection with the introduction of additional questions. These questions requested the participants to provide more information about the tertiary appraisal of *all* the coping strategies used. They were asked how much all the strategies contributed to the overall effectiveness, which one contributed the most, and which strategies they found ineffective.

Reappraisal: When a decision is made that coping has been ineffective a form of reappraisal presumably occurs and a person will go through a combination of primary

appraisal, secondary appraisal and coping, or he or she may re-enter just one of these. Participants were asked which part of the process they went through again by providing them with the options and asking them to rank the responses.

Control: Participants were asked to indicate on visual analogue scales how much control they thought they had over the problem. This enabled the perception of control to be placed within the coping process and to determine the influence in relation to other appraisals, the coping strategies and the outcome.

Reactions and outcome: Participants were asked to report the physical, emotional and cognitive responses which they experienced as soon as they were aware of the problem. This assessed the immediate reactions to a stressful event which could then be linked to outcome. It was assumed that changes in perceived cognitive, emotional and physiological responses would be the most common indicators of outcome and these could be positive (decrease in these responses) or negative (increase or no change in these responses) outcomes. So participants were asked to describe any changes in these reactions as a measure of outcome and to ascertain changes in reactions in the coping process.

It is possible that a longer term outcome may be need to be assessed if any of the stressful events were described as occurring over a longer period of time. The participants were asked (in every event) to comment on long-term indicators including change in sleep patterns, tiredness, minor health problems such as headaches, colds flu etc, anxiety, depression.

Temporal factors: Fuller investigation was attempted into the coping process by including temporal factors. The sequence of the coping process was mapped by requesting the participants to provide details of psychological, sequential, or chronological time. Psychological time refers to how long a person felt or thought something occurred, regardless of the actual time. Sequential time is the order the progress through the process occurs, and chronological time refers to the actual time in hours and minutes. Several questions focused on the duration of secondary and tertiary appraisal, the use of coping strategies and reactions, and the point at which these occurred in the coping process. These questions were intended to capture all three ways of assessing temporal factors.

Procedure

The participants were contacted by telephone and a convenient meeting time was arranged. At the first meeting they were given a brief explanation of the research. They completed the Informed Consent Form (see Appendix C), and any questions were

answered. Participants then completed the first of the Daily Records so that the researcher was available to answer any queries or problems. They were then asked to fill out a questionnaire at the end of every day, describing the most stressful event of that day. The first five participants filled out a Daily Record for three weeks. It was found that this length of time was unnecessary and too long for some participants to retain interest, so this was reduced to two weeks for the second five participants.

The Daily Record was the only method used for the collection of data. This had been piloted on two participants. It was found that these participants were limited in the initial awareness of their coping behaviour, and that it took time for them to understand and comprehend the complex factors involved. Therefore the content of the Daily Record was introduced gradually, so more questions on the coping process were added at each of three phases. In the first phase only the questions concerning the initial reactions, primary appraisal and coping strategies were included. In the second phase the questions on secondary appraisal and temporal factors were added, and in the final phase the questions on tertiary appraisal and outcome were added so that the entire coping process was included. The first five participants provided data with seven days of the full description of the coping process. It was found that the time required for the gradual introduction of the questions could be reduced, so the next five participants provided data with ten days for the full coping process.

The researcher made weekly contact to replace the Daily Record and to determine progress. Data for each individual was collated and a feedback session was held where the theory and full purpose of the research was explained, individual data was discussed and explained and any questions were answered.

Ethical Considerations

No major ethical problems were envisaged and none were encountered. The participants were reporting naturally occurring events, they were fully informed of the purpose of the study, and they had signed an informed consent form. However, the possibility that some participants may encounter major unexpected crises during the course of the research was recognised. Participants were encouraged from the beginning to contact the researcher in the event of any difficulties. The right to withdraw was made clear and this would have been encouraged and re-emphasised in the event of an unexpected crisis.

Data analysis

There was no known precedent for the data analysis of a process, using a similar methodology, so decisions were made step by step and the analysis evolved until a suitable method was found to explore the coping process. The data that was collected for the present research provided several possible approaches to examining the coping process, so the first step was to transcribe the responses to all the questions into matrix form (event by constructs), as suggested by Miles and Huberman (1984). A matrix was completed for each participant, and each event was documented according to the constructs of primary, secondary and tertiary appraisal, reappraisal, coping strategies, reactions, outcome and the temporal factors.

A total of 113 events was described by the ten participants. The reports of fifty-four of these events focused on the entire process and the decision was made to analyse these events only. The fifty-four events included data from all participants and the number of events they each documented on the entire coping process ranged from one to ten. The initial examination of the matrices indicated complexity and variability in coping behaviour so a decision needed to be made as to how to analyse the data at a level that was manageable. It was possible to examine the data between and within participants and/or between and within events. After some trial analyses it was decided to designate the unit of analysis as events, as this provided the clearest and most manageable approach to exploring the coping process. Therefore the data was analysed with disregard to the differences within or between participants.

Once the matrices had been established and the unit of analysis determined, the next step was to decide how to examine the constructs individually. The decision was made to conduct a descriptive analysis of the appraisals, coping strategies and outcome. The data within each of these aspects was summarised into frequency tables to ascertain how often these specific experiences were reported. A content analysis of the qualitative data was completed to determine the underlying reasons for the participants' coping behaviour. This data was also summarised into frequency tables to help clarify the main reasons reported. The means, ranges and standard deviations were calculated for the visual analogue scales and the coping strategies.

The next step of the analysis was to examine the relationships between pairs of constructs to determine where the links between the constructs were occurring. The frequency with which one construct, (or aspect of a construct as in secondary appraisal), was reported in relation to another construct was summarised. This frequency data was converted into percentages and these were cross-tabulated to examine the patterns between pairs of constructs. The results from this analysis

suggested that there were links between the constructs and some of these links were clearer than others.

These preliminary steps provided a basic understanding of how the participants reported their experiences of appraisals. coping strategies and outcome separately. and where there were links between these constructs. These analyses provided the basis to the method that was used for the final phase of the data analysis. which was to examine the coping process. As this was the aim of the present research. only the data from this final analysis is presented in the results section in chapter five.

The final phase of the analysis involved two approaches. The first approach was to continue to examine the data at the nomothetic level. To reduce the data to a more manageable level only the aspects of the coping process which were considered. from the preliminary steps, to be important or necessary were included. The raw data for these constructs of the coping process was summarised. for each event. into a format which was then converted into quantitative data. For example. constraints and repertoire were summarised into binary categories and then these were converted into percentages. Also included in the summary for each event were the ratings for the visual analogue scales and the specific coping strategies that were used. This quantitative data was reported at the descriptive level and no statistical tests were conducted.

The second approach used was based on the matrices that had been prepared for each event and it extended the analysis to the idiographic level. Each event was analysed as a case study to determine the complexity of the coping process at the individual level. All the data from the matrices was used for this analysis. The inclusion of temporal factors made it possible for the experiences reported in the events to be ordered in time. Each event was mapped so that the constructs were sequenced and the coping process became evident. The mapped events formed the basis for the description of the case studies that are included in chapter five.

As the events were mapped and the data analysis evolved on the coping process it became clear that there was difficulty with identifying a clear role for some appraisals. The reasons for this were the lack of qualitative data and the lack of information on the timing of primary appraisal, control and the stressfulness of the event. These omissions meant it was difficult to determine when these appraisals occurred and to place them within the context to assess their influence on the coping process. However, it was sometimes possible to ascertain more information as the participants would make miscellaneous comments. For example, the following comments were made concerning control.

"The situation was mostly out of my control."

"I was annoyed at myself because I had no control over some noises."

"Helped me to retain some control."

So where possible. during the mapping and description of the events these contextual comments were used for the interpretation of the role of these constructs.

Once a suitable analysis for the coping process had been determined. the final step was to ascertain the best method to report the results. It was decided that the summarised data would be used to compare the coping processes for different classifications of events. The events were grouped so that the data was examined from three different perspectives:

|1| The events were classified into different categories to determine if there were any differences in the coping process for different types of events. Some authors suggest that situational determinants of coping behaviour are important. For example, Mattlin. Wethington and Kessler (1990) contend that different coping strategies are used in different situations and that the success of coping strategies will alter according to the situation. Thoits (1986) suggests that it is important to determine whether or not one coping strategy is more effective than another in similar situations. Once again. most of the research into situational differences focuses only on the coping strategies. It was the intention of the present study to explore the coping process in different types of stressful events to ascertain the influencing factors in any situational differences.

|2| The data was divided into the three types of outcome to determine if there were any differences in the coping process when there were different outcomes for the stressful events. Pearlin (1991) discusses the notion that coping is usually considered to be the main factor that contributes to outcome variability. He maintains that researchers have not adequately established that this is the case and that one of the reasons for this is that the methodological and conceptual problems have not yet been overcome. The present study intended to explore the possibility that certain aspects within the coping process. such as appraisal or patterns of coping strategies may account for outcome variability.

[3] The data was examined from the perspective of each of the primary appraisals to determine their influence on the coping process. As discussed previously, primary appraisal is conceptualised as being an important aspect of appraisal yet the role that it plays in the coping process has not been determined adequately.

To summarise, the daily events study focused on the analysis of the 54 events which had a complete data set. These events were classified in three different ways: types of events (four sub-types); types of outcome (three sub-types); and different primary appraisals (three sub-types). Each of these classifications was examined at the group level and the individual level.

CHAPTER FIVE:

DAILY EVENTS STUDY: RESULTS

Chapter five describes the coping process from the three different perspectives described in chapter four: types of events; types of outcome and the different primary appraisals. The data analysis revealed the following aspects that need further clarification and discussion so that the reported results can be more readily understood.

Primary appraisal: The questions for primary appraisal were intended to obtain responses which could be readily classified into harm/loss, threat or challenge. However, it was found that the questions did not distinguish harm/loss in a satisfactory manner. There were very few responses to the particular question relating to harm/loss, and when the researcher categorised this appraisal according to the nature of the events there were few events which were considered to be harm or loss. Therefore the decision was made to delete this primary appraisal from the analysis. The questions intended to categorise threat and challenge were not considered entirely satisfactory but the responses were retained. In several of the events the questions for both threat and challenge were responded to affirmatively. It is considered theoretically possible for threat and challenge to occur simultaneously so this was included as a third primary appraisal. So the final categories for primary appraisal were threat, challenge, and threat/challenge. These are the three categories used to report the results in the present chapter.

Perceived ineffectiveness of coping strategies: The participants were asked to indicate the effectiveness of their nominated specific strategy on visual analogue scales and there was some discrepancy between the statement of effectiveness and the ratings. There were five events where the participants stated that the strategy was effective yet the rating was within the range for those strategies that were rated ineffective. When these ratings were considered within the context of the coping process for the events in which they occurred it was decided to include them in the ratings for ineffectiveness as the comments suggested that this was the case.

The tertiary appraisal ratings were completed for the one specific coping strategy that was nominated by the participant so this rating may have been for an effective or ineffective strategy. When the events were mapped the context suggested that in some of the events ineffective strategies had been perceived and not rated. These strategies were designated as ineffective by the researcher so that the role that they played within the coping process could be clarified.

Reappraisal: The discussion in chapter two suggested that reappraisal could occur at any stage of the coping process. The data analysis surrounding tertiary appraisal revealed a clearer definition of reappraisal which was used for the present study. A reappraisal was defined as occurring where coping strategies were initially appraised as ineffective, then a reappraisal occurred which resulted in more strategies being used. There were twelve events where a strategy had been rated ineffective by the participants and another twelve events were judged to have had ineffective strategies from the context. This was a total of twenty-four events where ineffective strategies were perceived, and of these a reappraisal occurred in twenty, or 37% of the total number of events. In the remaining four events there was no reappraisal. So in the present study, for reappraisal to occur there must be an appraisal of ineffective coping strategies, but when strategies are perceived as ineffective it does not necessarily mean that reappraisal will occur.

Outcome: In the present study the emotional, physiological and cognitive reactions were used as one measure of outcome. The data analysis showed that physiological reactions were rarely reported so these were not included in the results. Baseline information was collected from the reports concerning the beginning of the event and the participants were requested to provide further data about the changes that had occurred in their reactions by the end of the event. Some of the decisions concerning the outcome came from the context of the event and the comments made, rather than responses to specific questions. Other information on outcome came from the response to the question concerning how they knew a strategy had been effective as there is an inevitable link between tertiary appraisal and outcome.

From the responses it became clear that another measure of outcome was the participants' perception of the resolution of the problem that had created the stressful experience. So either a change in the reactions or a comment concerning resolution of the problem could be reported in an event. The decision was made to categorise the outcome according to the responses recorded. The first category was resolution which included both resolution of the problem and a positive change in the emotional and/or cognitive reactions. The second category was partial resolution, where only one of these measures was reported and it was clear from the context that the other had not occurred. The third category was no resolution, where neither measure was reported and it was clear that neither had occurred. These categories are the three sub-types of outcome used to report the results in the present chapter.

There are three sections in the present chapter, corresponding to the three perspectives. In each section the summary data is tabulated using three variations of descriptive statistics: the mean ratings from the 100 millimetre visual analogue scales for stress,

control and tertiary appraisal; the mean number of coping strategies used; and the percentages of the events which had the defined primary and secondary appraisal processes. perceived ineffective strategies and reappraisal. Comparisons are made of the appraisals. coping strategies and outcome for each sub-type. Then the coping process for each sub-type is described and. as an illustration of each coping process. a specific event is presented as a case study. The different coping processes are represented by the use of diagrams. These were constructed by noting the relative frequencies from the data in the tables. and from a composition of the flow of the data from the mapped events. Finally. the sub-types are compared.

CLASSIFICATION OF EVENTS

The majority of the 54 events (90%) could be classified as discrete. that is. ones which have a relatively short duration, for example, dealing with a minor injury or attending a stressful meeting. These discrete events were divided further into three categories. First. distinct events. where the problem had the potential to have a definite outcome and the resolution stopped the problem as well as the need to be dealing with it. For example. catching an injured cat. Second. indefinite events. where a resolution was needed but the outcome may not necessarily stop the need to be dealing with it. as there may be ongoing consequences. For example. getting held up at work. Third. organisational events. which were more task-oriented events. for example. getting a meal ready for a partner. The fourth type of event consisted of the remaining 10% of events which could be considered ongoing. that is. they needed to be dealt with as the event unfolded over a longer period of time.

Table 1 presents the descriptive data for the appraisals, coping strategies and outcome in each of these four types of events. The mean ratings showed that the participants experienced the appraisals of stress and control differently for the four types of events. The mean ratings for these appraisals in the organisational events and indefinite events can be considered moderate. The participants reported low stress and high control in the distinct events, and they reported the converse in the ongoing events, with high stress and low control.

The participants reported differences between the types of events for primary appraisal. The highest percentage of threat appraisal was in the ongoing events where there was no challenge appraisal. showing that in all the events in this category there was an element of threat appraisal. The indefinite events also had a higher element of threat appraisal than challenge appraisal. In contrast, the distinct events had a higher element of challenge appraisal. with no threat/challenge appraisals. The organisational events

TABLE 1:   *Descriptive data for the constructs in the coping process in each type of event*

Construct	EVENT	CATEGORY		
	Distinct (n = 16)	Organisational (n = 6)	Indefinite (n = 27)	Ongoing (n = 5)
STRESS	x̄ = 40.6	x̄ = 61.6	x̄ = 63.0	x̄ = 75.8
CONTROL	x̄ = 78.6	x̄ = 51.0	x̄ = 44.8	x̄ = 24.6
PRIMARY APPRAISAL				
Challenge	68.75%	50.0%	29.6%	0.0%
Threat	31.25%	0.0%	40.7%	60.0%
Threat/challenge	0.0%	50.0%	29.6%	40.0%
SECONDARY APPRAISAL				
Constraints	30.0%	0.0%	30.0%	60.0%
Wide repertoire	30.7%	83.3%	55.5%	20.0%
Occurred before	68.8%	83.4%	63.0%	80.0%
Familiar strategies	90.9%	100%	94.1%	50.0%
COPING STRATEGIES				
Number	x̄ = 3.5	x̄ = 5.0	x̄ = 4.74	x̄ = 4.6
Type	rational action	rational action	rational action	-
	-	emotional response	emotional response	emotional response
	positive thinking	positive thinking	-	positive thinking
	-	relaxation	relaxation	fatalism
	-	seek help	-	other
TERTIARY APPRAISAL				
Effectiveness	x̄ = 78.7	x̄ = 77.8	x̄ = 76.6	x̄ = 30.2
Ineffective	31.2%	33.0%	40.7%	80.0%
Reappraisal	25.0%	33.0%	40.7%	60.0%
OUTCOME				
Resolution	68.75%	100%	70.3%	0.0%
Partial resolution	18.75%	0.0%	22.2%	40.0%
No resolution	12.5%	0.0%	7.4%	60.)5

had no threat appraisal and an equal number of events with challenge and threat/ challenge appraisals.

There were differences in secondary appraisal between the types of events. The participants reported the highest percentage of events that had constraints in the ongoing events, with the indefinite and distinct categories having a lower percentage. There were no constraints for the organisational events and this category also had the highest percentage of events with a wide repertoire. The lowest percentage of events that had a wide repertoire was in the ongoing category. The data for history showed that in all the categories more than sixty percent of the events had occurred before and of these events, familiar strategies were used in the indefinite, distinct and organisational categories more than ninety percent of the time, whereas familiar strategies were used in the ongoing events only fifty percent of the time.

The mean number of coping strategies used was similar for the indefinite and ongoing events, but a higher mean number of strategies was used in the organisational events, and a lower number in the distinct events. The coping strategies which were used in fifty percent or more of the events are listed in Table 1, and this shows that there were different patterns for the different types of events. Rational action was not used as frequently in the ongoing events, emotional response was not used as frequently in the distinct events, and positive thinking was not used so often in the indefinite events. Relaxation was used more frequently in the indefinite and organisational events. Table 2 provides the mean number of each of the coping strategies in the categories of events and this also shows that there were different patterns of the use of coping strategies for the four categories. Some coping strategies were not used at all for some categories. For example, there was no use of self-adaptation or 'other' in the distinct category, and some strategies were less likely to be used such as fatalism, emotional response and seeking help in the distinct category.

The mean ratings for the perceived effectiveness of coping strategies was high (<76) for all categories except the ongoing which had a noticeably lower mean rating at 30.2. The ongoing events also had the highest percentage of events with perceived ineffective strategies, and the highest percentage of events that underwent reappraisal.

The most noticeable difference for outcome was that all of the organisational events were resolved, and none of the ongoing events had a resolution. The majority of the indefinite and distinct events were resolved or partially resolved.

These results show that there were differences in the appraisals, coping strategies and outcome for the different types of events. The following sections describe and illustrate

TABLE 2:   *Mean number of each of the coping strategies used in the types of events*

| | COPING STRATEGIES | | | | | | | | | | | | | |
EVENTS	rational action	seek help	hostile reaction	fatalism	emotional response	positive thinking	distraction	relaxation	wishful thinking	humour	blame	faith	self adaptation	other
Indefinite	88.8	48.1	22.2	25.9	81.4	40.7	18.5	51.8	18.5	14.8	22.2	7.4	25.9	11.1
Distinct	75.0	43.7	18.7	6.2	31.2	62.5	31.2	12.5	31.2	18.7	18.7	6.2	0.0	0.0
Organisation	100.0	66.6	33.3	0.0	83.3	83.3	16.6	66.6	0.0	33.3	0.0	0.0	16.6	0.0
Ongoing	40.0	40.0	0.0	60.0	60.0	80.0	40.0	20.0	20.0	20.0	0.0	0.0	20.0	60.0

how the coping process for the types of events was experienced differently by the participants.

Distinct events

The coping process for the events in the distinct category appeared to be relatively straightforward and positive in comparison to the other categories of events. Figure 2 shows the coping process for the events in the distinct category and a possible flow between the appraisals, coping strategies and outcome. The diagrams used throughout the present chapter were derived from the frequency data on the tables and the constructs represented are those which had the highest frequency. e.g. in the distinct events the primary appraisal which had the highest percentage was challenge. The qualifying adjectives in the diagrams are used comparatively. The direction of the flow was derived from the aggregation of the mapped individual events. Figure 2 shows the distinct events had a low stress appraisal with high challenge and control appraisals. There was a reciprocal flow between these appraisals which then influenced the high rating of tertiary appraisal. These combined appraisals contributed to a positive outcome as the majority of the events were resolved or partially resolved. The distinct events had a low mean number of coping strategies which may have been linked to the fact that in approximately seventy percent of the events there was considered to be a narrow repertoire. The preliminary analysis showed that the main reason for a narrow repertoire was because the limited choice of coping strategies was related to the specific problem. This suggests that the distinct events influenced the coping process as they presumably were perceived as being able to be dealt with effectively. using few coping strategies.

Event A illustrates the coping process for the distinct category. The participant reported finding an oil leak in his car, which was an event which had occurred before and he had used the same method to deal with it previously. The nature of the event called for a definite solution and from previous experience he knew that he would be able to deal with it so the coping process that the participant used was straightforward. He reported feeling a little anxious for five to ten minutes and this may have contributed to his description of the event as moderately stressful (55 on the 100 mm visual analogue scale). He had a perception of challenge throughout and this may have flowed reciprocally with the high perception of control (93) which then led to his choice of a single strategy from a narrow repertoire as he considered that there was only one way to deal with it. He used rational action immediately and considered that this was very effective (97) because he knew he had solved the problem when the oil stopped leaking.
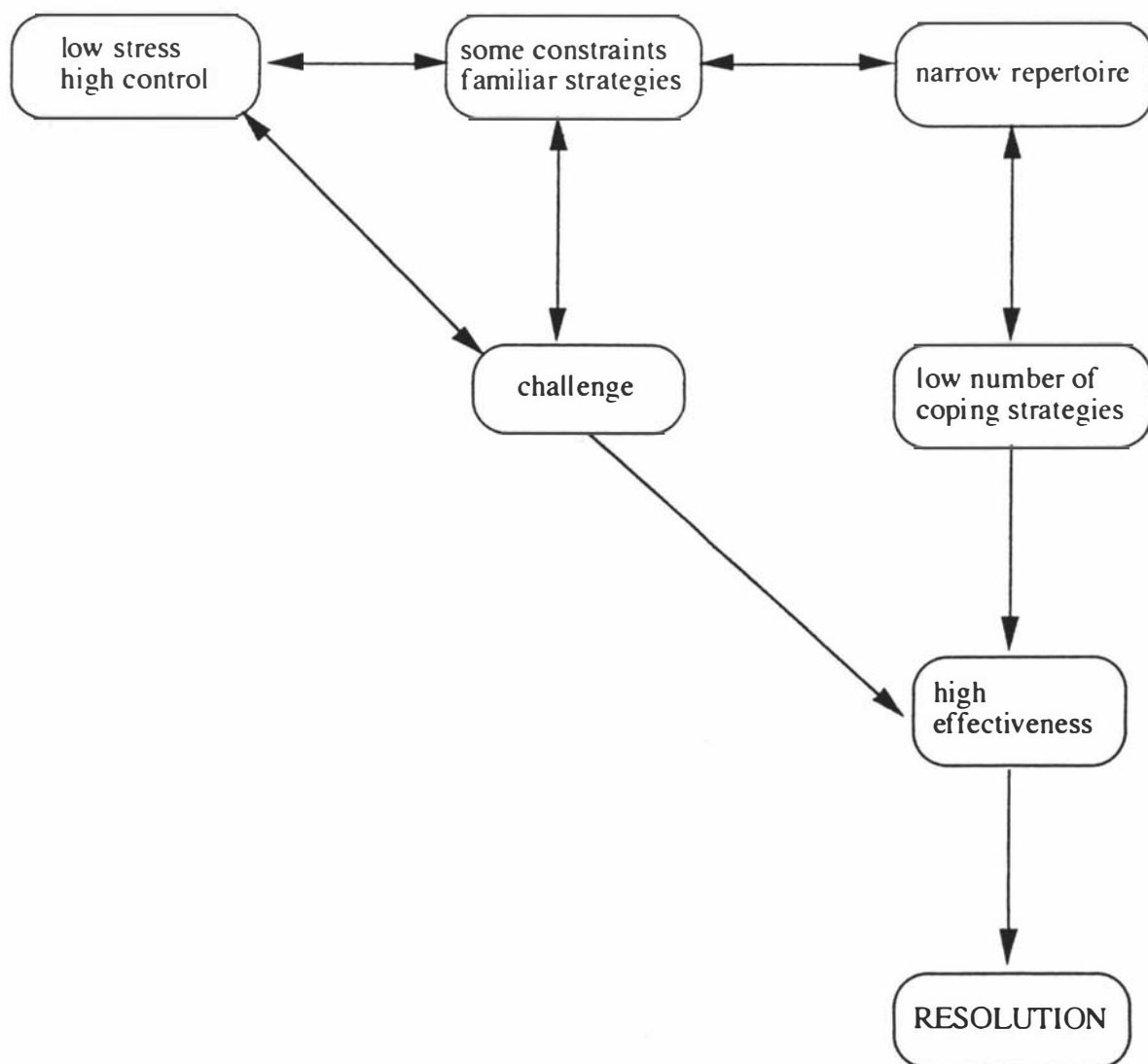
FIGURE 2: Diagram showing the possible flow between the constructs in the coping process for the distinct events

The coping process that the participant used for this event appears to have been influenced by the distinct nature and by his perception that he knew exactly what to do to resolve the problem. This event illustrates how the initial appraisal processes (stress, control and challenge) may have influenced the coping process positively so that the choice within secondary appraisal was obvious and uncomplicated, which led to the effective use of the one strategy he chose, and contributed to a positive outcome.

Organisational events

The coping process for the organisational events also appeared relatively straightforward. Figure 3 provides a diagrammatic view of the coping process for the organisational events. There was a moderate appraisal of stress and control and all events had an element of challenge appraisal. These appraisals may have influenced the fact that there were no constraints and that familiar strategies were used in all events. There was a wide repertoire for the majority of events which contributed to the organisational events having the highest mean number of coping strategies. Table 2 shows that five of the strategies were not used at all, suggesting that although the participants had a wide range from which to choose, they were selective in their choice of strategy, presumably choosing those they knew would be effective. All these aspects of the coping process appeared to contribute to a high rating of effectiveness and resolution of the problem in all the events. All the events that had perceived ineffective strategies also underwent a reappraisal, so the wide repertoire presumably meant there were coping strategies available to make a change to more effective ones.

Event B illustrates the coping process for the organisational events. This event involved the participant trying to do too many things at once at work and not being able to do them very well, and also trying to meet a deadline on organising a seminar. This type of situation had occurred before and the participant had used similar ways of dealing with it then. He began by being aware of his high stress (87) and this may have influenced his low perception of control (15). He described his emotional reaction as being worried that time was running out to get things done, and his initial cognitive reaction appeared to have an influence on the coping process as he "realised would have to just do one thing at a time and as best I could." It may have been at this point that his appraisal changed from threat to challenge. He considered that he had a wide repertoire as he had had previous experience of similar situations. He first used rational action and stated that he was aware of this choice as he saw things as getting out of control unless he took action. He described rational action as "knew had to get a certain amount of work done, went out in the car and did some writing away from the phone." He also sought help by phoning a colleague, then used relaxation by going home for lunch "away from the panic." He then used emotional response by hiding his anger at not being able to do the
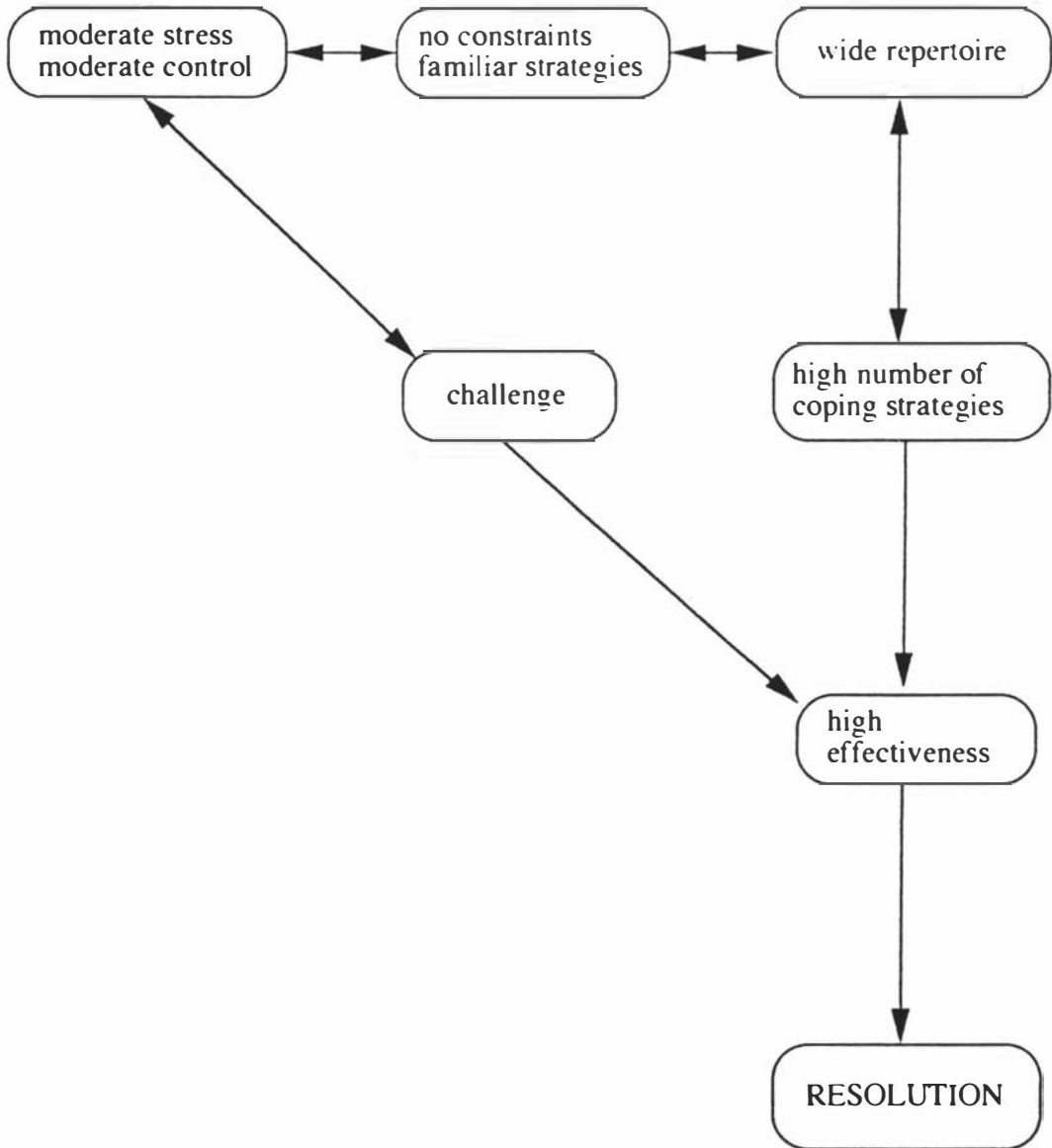
FIGURE 3: Diagram showing the possible flow between the constructs in the coping process for the organisational events

job effectively, and then used positive thinking. He considered that rational action had been effective as he was able to write and gather his thoughts, and he stated that all the strategies contributed to the effectiveness by controlling the situation.

The coping process for this event was relatively straightforward and the organisational nature appeared to have contributed to the resolution of the problem. Once he was aware of his emotional reactions he went through a cognitive process to decide how to organise his tasks and this was based on previous similar experiences, including using strategies that he knew would be effective. He then used the coping strategies and considered that they were effective which led to a satisfactory outcome.

Indefinite events

The coping process for the indefinite events (Figure 4) involved a moderate appraisal of stress and a moderate to low appraisal of control, with a dominant primary appraisal of threat. These appraisals may have influenced secondary appraisal as there were some constraints and the repertoire was wide or narrow. Familiar strategies were used where the events had occurred before and these contributed to this category of events having the second highest mean number of coping strategies, and Table 2 shows that all coping strategies were used. There was a high rating of perceived effectiveness and in all the events where ineffective strategies were perceived reappraisal occurred. The majority of the events were resolved or partially resolved.

Event C illustrates the coping process in an indefinite event. This event was work related and involved speaking to three short meetings of apathetic workers. The participant found the situation relatively stressful (72) and he had a perception of low control (24) which may have influenced the appraisal of both threat and challenge. When he first began the talks he became aware that he began to stutter and repeat himself, and he had a feeling of not being supported. He described his cognitive reaction at this point as "realised I had to keep going," and he appeared to go through a cognitive process of recognising that "workers didn't have background understanding and therefore best I build up a relationship." He felt constrained because he would have liked to have given them more information but he didn't think that they would understand. This was a new situation for the participant and he considered that he had a narrow repertoire as it "seemed like a case of going through the motions." However, he then used the first coping strategy of relaxation by having a cup of tea and during this time stated that he "could see situation more clearly and tried to stay in control." To do this he then used rational action ("carried on the meeting and adapted the talk to the situation") and fatalism ("just had to do best I could") together, followed by emotional response (suppressed anger) and positive thinking ("beginning to build up a relationship

FIGURE 4: Diagram showing the possible flow between the constructs in the coping process for the indefinite events

with them"). He considered that these coping strategies were effective, especially rational action as adapting to the situation and taking action to remedy it had the effect of the workers appearing more attentive. and therefore the outcome was satisfactory.

The participant made the comment for this event that he thinks that he is "more inclined to take direct action rather than think about the problem clearly first." and it appears that he had started the talks before he realised that he was under stress. While his statement is no doubt accurate. it was probably the particular situation which created his need to deal with it in the way he did. Had the workers responded more enthusiastically then the participant may not have found the situation stressful. but once he was aware he was under stress he clearly went through a cognitive process to decide how to deal with it and it seems that the changes in his thinking played a major role in his coping with this event.

Ongoing events

The events in the ongoing category (Figure 5) had high stress appraisal. low control appraisal and all events had some threat appraisal. These negative appraisals may have influenced secondary appraisal as more than half of the events had constraints and the majority had a narrow repertoire. When the events had occurred before familiar strategies were used in only half the cases. The ongoing category was the only one where the strategy of 'other' was used frequently. suggesting that the participants were attempting to find alternative ways of dealing with the situation. The negative appraisal presumably continued to influence tertiary appraisal as ineffective coping strategies were perceived in eighty percent of the events. and the mean rating for effectiveness was low, with no events fully resolved.

Event D describes a situation where an ongoing event was being managed. The participant described the situation involving an incident where his father-in-law had relied on the participant to do something for him and this type of situation had been ongoing for the last eighteen months. This may have contributed to the high perception of stress (92). He first became aware of his reactions and reported that his heart rate climbed a bit and he felt a bit angry for approximately half an hour. These reactions may have influenced the fact that he viewed the situation as a threat and considered that he had little perceived control over the situation (12). He commented on the lack of control:

> "If it were one of my parents the control would be easier as I could tell them that they were interfering in our lives too much and they would understand."
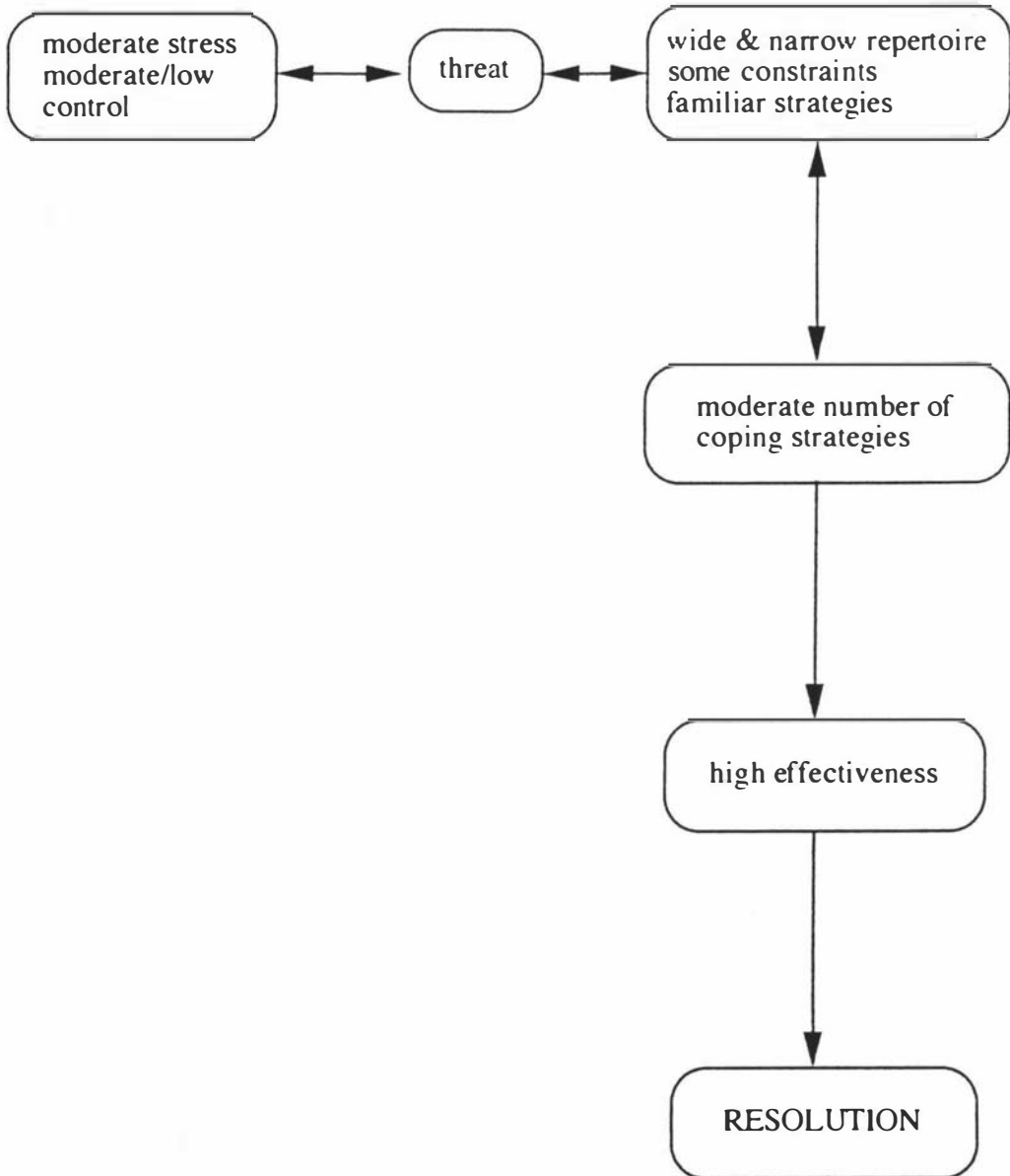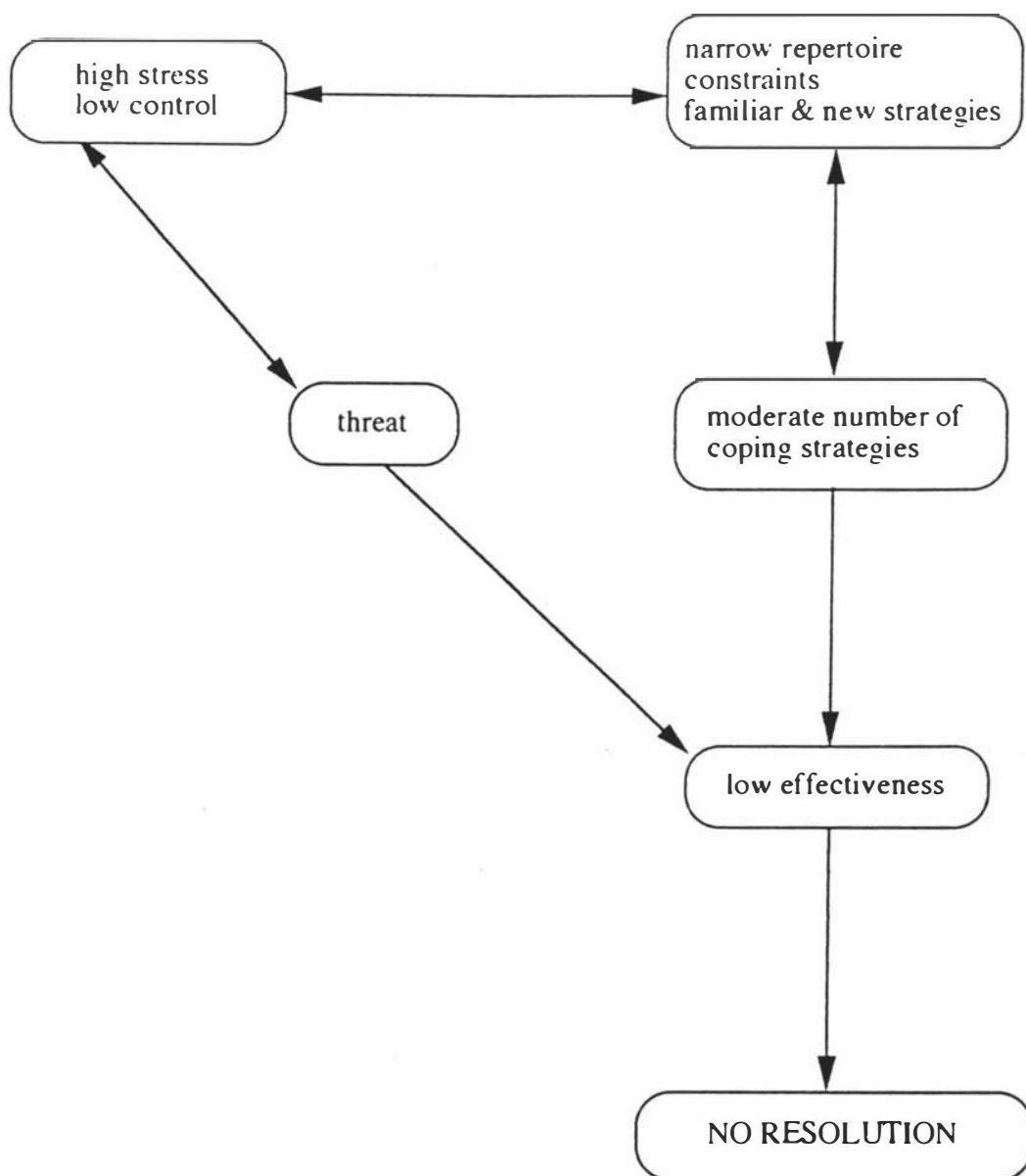
FIGURE 5: Diagram showing the possible flow between the constructs in the coping process for the ongoing events

It is likely that this perceived lack of control was a major factor in establishing this as an ongoing event as it created a constraint, and if the constraint did not exist he may have been able to deal with the situation more effectively. The specific constraint that he described for the event was that he really wanted to tell his father-in-law to "P. off. but I'm not quite that heavy". This appeared to influence his consideration that he had a wide repertoire yet he used only two strategies as he stated he had tried all others. He reported that he had used similar strategies previously but generally unsuccessfully.

The first strategy the participant used was fatalism (accepting that nothing could be done about the situation). He chose this one because he had tried all others, it took him 5 to 10 minutes to choose it and he started using it as soon as he had made the decision. He found the strategy ineffective (5), but did not comment on how he knew it was ineffective. He then thought about the event again and chose another strategy of thinking about the positive side to the problem. He did not report the effectiveness of this strategy, but it appeared to have the effect that it altered his perception from worrying to thinking "what the hell", and he commented that this sort of situation had been happening quite a lot lately so he just carried on as if his father-in-law was not there and he started to calm down. He was also aware that he possibly slept less with continuing thoughts, suggesting an unsatisfactory longer term outcome. His overall approach to the problem was "I didn't really think too much at all, just got 'peed off' then carried on my way."

The process that the participant went through for this event included a perception of high stress, threat and low control appraisal. There was a constraint and a perceived lack of control. The nature of the ongoing event meant that he had a history of having tried many other coping strategies unsuccessfully so all these factors may have contributed to the unsatisfactory outcome. The participant began with a negative appraisal of the situation as history indicated that he would not be able to deal with it effectively, and although his perception did alter it was to a more apathetic appraisal rather than a positive appraisal, so this may have influenced the unsatisfactory outcome.

Comparison of the types of events

The results show that there were differences between the types of events. A comparison of the distinct and organisational events shows that the differences occurred in the appraisal of stress and control, secondary appraisal and coping strategies. In the distinct events the high control and low stress flowed reciprocally with the challenge appraisal and the nature of the event to create a need for a narrow repertoire only. The narrow repertoire contributed to an effective use of a low number of strategies. In contrast, in the organisational events the participants considered they had a wide repertoire which

contributed to a higher number of effective coping strategies being used. It seems that the nature of the event influenced the repertoire as the distinct events had a clearer way to deal with the problem, as Event A shows. Despite these differences both types of events had a high rating of perceived effectiveness and resolution of the problem, and this may have been partly due to the similarities between these types of events. In both, familiar strategies were used when the event had occurred previously. Both categories of events used the coping strategies of rational action and positive thinking, suggesting that these contributed to the overall effectiveness and resolution, and challenge was the predominant appraisal in both types of events. Presumably it was the manner in which these appraisals and the particular coping strategies interacted which contributed to the effectiveness.

In contrast, the only similarity between the indefinite and ongoing events was that there was an appraisal of threat, yet the indefinite events still had a high rating of tertiary appraisal and resolution of the problem, so it does not appear that primary appraisal alone accounts entirely for tertiary appraisal and outcome. The ongoing events were the only ones which had the combination of high stress, low control, high percentage of events with constraints, a lower percentage of events which used familiar coping strategies, and rational action was used less frequently than in the other categories. This would suggest that the combination of these appraisals and coping strategies in the coping process, along with a threat appraisal, contributed to the low rating of effectiveness and the high percentage of events which had ineffective strategies and no resolution.

In the indefinite events the primary appraisal (threat, in this case) did not appear to influence tertiary appraisal in the same way that it had in the other categories. A possible explanation for this is that both the indefinite and distinct events had similar mean ratings for the stress and control appraisals and these may have had a major influence on the tertiary appraisal and outcome.

Summary

The results show that the nature of the event reciprocally influenced the coping process and this interplay may have determined how straightforward or complex the coping process was. It is not possible to determine whether the event influenced the coping process, or the coping process influenced the event, or both. It is clear that the coping process for each category of events was different, although there were some similarities. It is also clear that it was the different combinations of the appraisals and coping strategies which determined the effectiveness and outcome, rather than any specific construct.

OUTCOME AND THE COPING PROCESS

The results for the categories of events showed that the appraisals and coping strategies in the coping process influenced the outcomes in some way. The current section compares the coping process for those events where the outcome differed. Outcomes were classified into resolution, partial resolution and no resolution.

Table 3 shows the data for the constructs in the coping process for the three types of outcome. The events in the resolution group had the lowest mean rating of stress and the highest mean rating of control. There was little difference in the ratings for these appraisals in the partial resolution and no resolution events as both had moderate stress and low control.

The resolution group had the highest percentage of events with a challenge appraisal and when this was combined with the events that had a threat/challenge appraisal. nearly seventy percent of events had an element of challenge. The partial resolution group had the highest percentage of events with threat appraisal and approximately eighty percent of the events had an element of threat. The no resolution category had a slightly lower percentage of events with an element of threat.

There were clear differences in the percentage of events with constraints. The lowest percentage was in the resolution group, with more constraints in the partial resolution group, and the highest percentage in the no resolution group. In the resolution and partial resolution groups the participants considered they had a wide repertoire in approximately half of the events. whereas this was much lower in the no resolution group. The resolution and no resolution groups had a similar percentage of events that had occurred previously and of these the majority used familiar strategies. The partial resolution group had a much lower percentage of events that had occurred previously, and familiar strategies were used in all of these events.

The same pattern of coping strategies that was used most frequently was evident in the resolution and partial resolution groups. In both groups, rational action, emotional response, positive thinking and seeking help were used in more than half of the events. In addition Table 4 shows that in the resolution group distraction was less likely to be used, and in the partial resolution group fatalism was more likely to be used. The partial resolution group had a higher mean number of coping strategies than the partial resolution group. A different pattern of strategies was used in the events that had no resolution. Table 3 shows that only two strategies were used in more than half of the events and emotional response was one of these, as it was in the other two groups. Distraction was the other strategy used frequently and Table 4 shows that hostile

TABLE 3:   *Descriptive data for the constructs in the coping process for the types of outcome*

Construct	TYPES OF OUTCOME		
	Resolution (n = 36)	Partial resolution (n = 11)	No resolution (n = 7)
STRESS	$\bar{x} = 53.5$	$\bar{x} = 67.0$	$\bar{x} = 61.8$
CONTROL	$\bar{x} = 61.7$	$\bar{x} = 37.8$	$\bar{x} = 37.1$
PRIMARY APPRAISAL			
Threat	30.5%	45.4%	42.8%
Challenge	50.0%	18.1%	28.5%
Threat/challenge	19.4%	36.3%	28.5%
SECONDARY APPRAISAL			
Constraints	19.4%	36.3%	71.4%
Wide repertoire	53.0%	50.0%	28.6%
Occurred before	72.3%	36.4%	71.5%
Familiar strategies	92.3%	100%	80.0%
COPINGSTRATEGIES			
Number	$\bar{x} = 4.25$	$\bar{x} = 5.0$	$\bar{x} = 4.1$
Type	rational action	rational action	distraction
	emotional response	emotional response	emotional response
	positive thinking	positive thinking	-
	seek help	seek help	-
TERTIARY APPRAISAL			
Effectiveness	$\bar{x} = 83.1$	$\bar{x} = 62.9$	$\bar{x} = 28.1$
Ineffective	27.7%	45.4%	100%
Reappraisal	27.7%	45.4%	71.4%

TABLE 4: *Mean number of each of the coping strategies used in each type of outcome*

| | COPING | STRATEGIES | | | | | | | | | | | | |
OUTCOME	rational action	seek help	hostile reaction	fatalism	emotional response	positive thinking	distraction	relaxation	wishful thinking	humour	blame	faith	self adaptation	other
Resolution	88.8	50.0	19.4	13.8	58.3	50.3	11.1	44.4	16.6	19.4	19.4	2.7	16.6	2.7
Partial Resolution	81.8	54.5	9.0	45.4	81.8	81.8	36.3	36.3	18.1	9.0	0.0	18.1	9.0	27.2
No Resolution	42.8	28.5	42.8	14.2	71.4	42.8	71.4	14.2	42.8	28.5	14.2	0.0	28.5	14.2

reaction and wishful thinking were more likely to be used, and relaxation was less likely to be used in the no resolution group. This group also had the lowest mean number of strategies.

There were differences in tertiary appraisal between the outcome groups. The highest rating of effectiveness was in the resolution group which also had the lowest percentage of events with perceived ineffective strategies. The partial resolution group had a lower mean rating of effectiveness and a higher percentage of events which had ineffective strategies. The no resolution group had the lowest rating of perceived effectiveness and all the events in this group had perceived ineffective strategies, but only approximately seventy percent of these events underwent reappraisal. In contrast, all the events in the resolution and partial resolution groups underwent reappraisal. The following sections describe and illustrate how the coping process was experienced differently for the different outcomes.

Resolution events

The coping process for these events appeared positive and straightforward. Figure 6 shows that there was a moderate perception of stress and control with the majority of events having challenge appraisal. These appraisals may have influenced secondary appraisal as there were few constraints, either a wide or narrow repertoire and familiar strategies were used in the events that had occurred previously. The pattern of coping strategies (rational action, emotional response, positive thinking and seeking help) that was used may also have contributed to the positive outcome as there were few perceived ineffective strategies and a high rating of effectiveness.

Event E illustrates the coping process for an event which was fully resolved. The participant was dealing with organising his time at work and found this stressful (81) and had little perceived control (16). He did find the situation challenging, but did not think about this perception until after he had used the coping strategies. He became aware initially of his anger when he was "short with colleagues." This lasted for approximately ten minutes and at this point he used the coping strategy of hostile reaction which was perceived as ineffective. He then reappraised the situation and realised he needed to "cool down" to be able to deal with the situation effectively. He had a wide repertoire from which to choose his coping strategies and used relaxation by smoking a cigarette to cool down, as well as humour and emotional response. He also used strategies which altered his thinking about the situation: positive thinking and self-adaptation. He then used rational action which he found very effective (91) and this strategy enabled him to "slow down and prioritise," and he continued to use it for
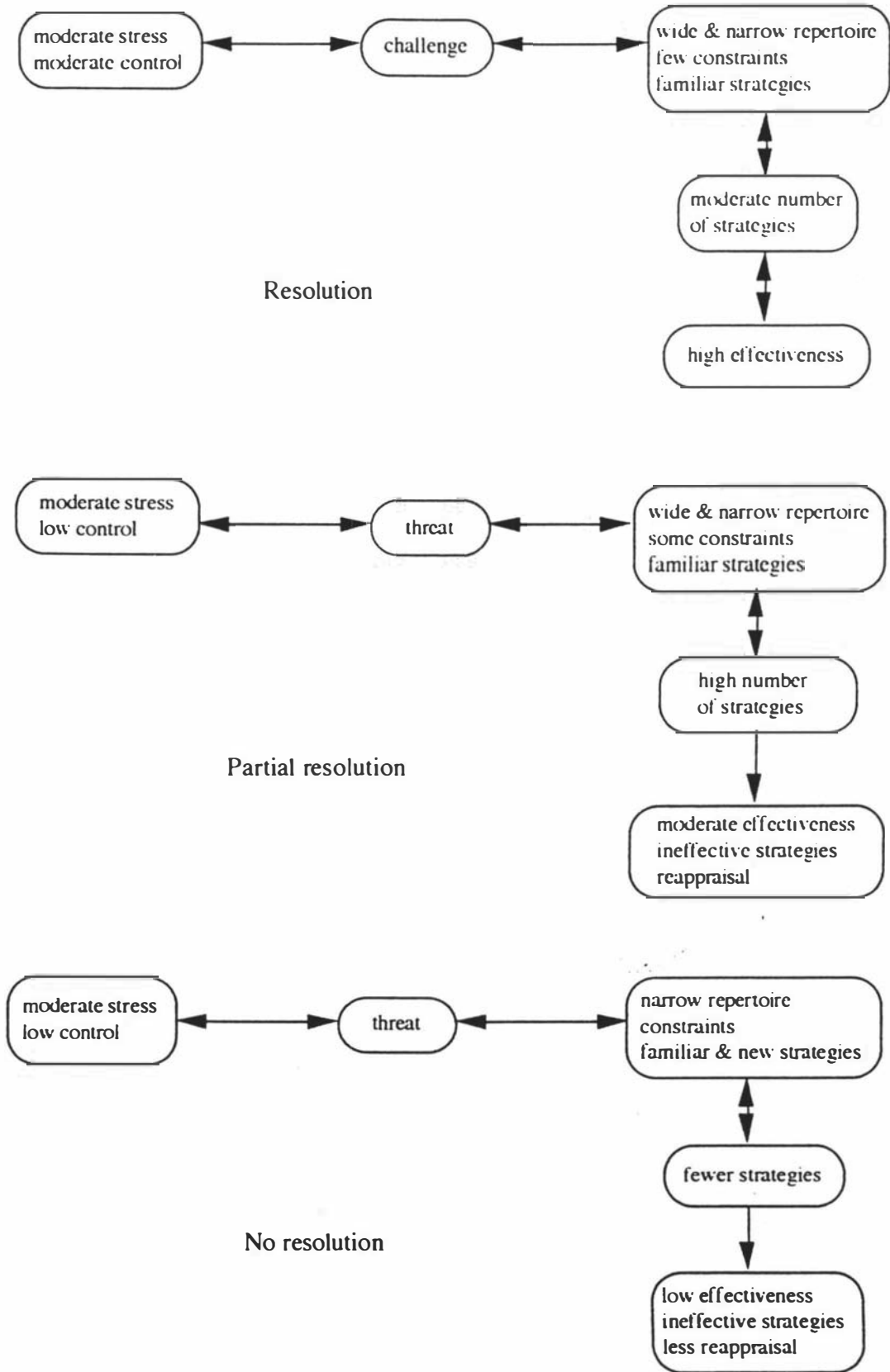
FIGURE 6: *Diagram showing the possible flow between the constructs in coping process for the types of outcome*

approximately four hours so that he did as much as he could in the time he had available. He stated that his cognitions altered from "negative to constructive."

The changes that occurred in the coping process in this event appear to have contributed greatly to the resolution. If he had not reappraised his initial emotional reactions and found ways to reduce these he would not have been able to deal with the situation effectively. The change in his emotions and his thinking, through the use of coping strategies clearly led to perceived effective strategies and resolution of the problem.

Partial resolution events

Figure 6 shows that the coping process for these events had a moderate mean rating of stress and a low rating of control with the majority of events having an element of threat. There were some constraints and only approximately one third of events which had occurred before. The fact that the majority of events were new ones influenced the outcome as presumably the participants were needing to find new ways of dealing them, and these new strategies may not necessarily have been effective. The events in this group had the highest mean number of coping strategies and the pattern of strategies that was used most frequently was the same as that in the resolved group. The perception of threat and low control may have influenced the moderate rating of effectiveness and the fact that nearly half of the events had perceived ineffective strategies.

Event F provides a description of an event which had a partial resolution. The participant was anticipating facing a stressful situation when she returned to work following leave. She was dealing with this new situation for the fortnight that she was on leave and stated that because of this length of time she was anxious and uptight at times and was aware that she needed to remain detached. She found the event both challenging and threatening as well as very stressful (97) but with a high perception of control (91). She considered that she had a narrow repertoire as "to act positively in any situation is my main aim in dealing with problems." She used rational action by planning to take direct action once she returned to work, and she started using this strategy immediately and continued to use it over the fortnight. She also used seeking help, emotional response and positive thinking simultaneously with rational action over the same period, and also used distraction and humour. Over this period she also described her cognitions as "accepted what I couldn't change, changed what I could." Her description of this event as the most stressful for the day occurred on the day she returned to work when she took the direct action she had been planning. She rated the strategy of rational action as very effective (98) as a meeting was called and this direct action caused a confrontation. She stated that the "outcome was not completely

resolved but will be in due course." and that "because I was able to take positive action it eased the situation."

This event was only partially resolved. possibly because there were other people involved with the problem. Although the participant had a high perception of control. and did what she could to deal with the situation and alter her own thoughts about it. she had no control over how other people dealt with it. She stated that she "tried to be objective and insisted on open honest communication which others found threatening." It appears that it was the nature of the situation which contributed to the lack of a total resolution. and the coping process which led to the partial resolution.

No resolution events

The events in the no resolution group had a moderate perception of stress. a low perception of control and a predominantly threat appraisal (Figure 6). There was a high percentage of events with constraints and a narrow repertoire and. in comparison with the other outcome groups. a lower percentage of events where familiar strategies were used. There was a different pattern of coping strategies used. suggesting that this may have had an influence on the outcome. All the events had ineffective strategies and reappraisal occurred in only approximately seventy percent of these events. The rating of effectiveness was low.

Event G illustrates the coping process for an event which was not resolved. The participant described dealing with an issue that arose from a meeting and this was a situation that had occurred previously. She found the event threatening and challenging. with a moderate appraisal of stress (57) and a very low perception of control (06). During the meeting she became aware of feeling hot, uncomfortable and fidgety. with some distress and frustration. She wanted to limit the discussion and take control by being totally directive, but felt constrained as she "felt it would have made matters worse, undermined other people." This constraint created a narrow repertoire as she wanted to avoid conflict, so she continued to be aware of her reactions for 10 to 20 minutes when she decided that her "discomfort was at a peak," and began using coping strategies. She used rational action. by suggesting solutions, and distraction. by trying to change the topic and move through the agenda. She also used emotional response at the same time by trying to conceal her discomfort and frustration. She rated distraction as ineffective (24) as it didn't change the problem. During the time she was using these strategies she was also altering her thoughts "from trying to always find solutions to accepting status quo and trying to work with the current situation." This cognitive change appeared to help her deal with the situation but did not resolve the problem. Once she left the meeting she felt relief at being out of the situation and she continued

to deal with it by using wishful thinking and self-adaptation. Through using these strategies her distress changed to concern a couple of hours later. and several hours later she was "more certain of own stance and more sure what to do next time."

This event shows that even when the problem was not resolved the participant still made attempts to deal with the event and continued to do so after she left the situation. Her ongoing coping helped to reduce her emotions and alter her cognitions so that she reached a satisfactory outcome for herself. although the problem remained unresolved. An influencing factor in the outcome appeared to be the constraint and low perception of control. If the participant had chosen to be directive. as she stated. this would have meant she took control. Presumably if she had done so this would have increased her perception of control and the outcome may have been different.

Comparison of the outcome groups

The only similarity between the three outcome groups was that they had a similar mean rating of stress. There were no similarities between the resolution group and the no resolution group. suggesting that there were quite different coping processes for these outcomes. The resolution and partial resolution groups had a similar percentage of events that had a wide repertoire. a similar pattern of strategies was used and reappraisal occurred in all the events where there were perceived ineffective strategies. This suggests that these aspects of the coping process may be a factor in at least a partial resolution. A wide repertoire may provide the opportunity to choose effective strategies. or use several to ensure that the outcome is successful. The nature of the particular strategies that were used may have contributed to the positive outcome. and reappraisal meant that there was a decision to change the coping strategies to some that were more effective.

The partial resolution and no resolution groups had a similar low rating of control and a predominantly threat appraisal. This suggests that these appraisals may have influenced the lack of resolution, presumably by creating a negative perception of the ability to deal with the situation effectively. This negative appraisal may have continued to influence the coping process in the no resolution group by leading to a low appraisal of effectiveness. The no resolution group also had noticeably more constraints, a narrow repertoire, a different pattern of coping strategies and less likelihood of reappraisal in the 100% of events that had ineffective strategies. This suggests that these aspects of the coping process contributed to a total lack of resolution.

Ineffective strategies and outcome

The participants reported ineffective coping strategies in all the events in the no resolution group. There were also some events in the resolution group where ineffective strategies were reported. yet these events still had a successful outcome. This suggests that there may be factors in the coping process which determined the outcome despite perceived ineffective strategies being used. To ascertain these factors. the events in the no resolution group and the events in the resolution group that had ineffective strategies were compared. Table 5 presents the data for these events.

There were similarities in both groups: there was a low perception of control: the coping strategy of emotional response was used; and in all the events where hostile reaction was used this was perceived as ineffective. There were several differences between these two groups. As these comparisons were made at a finer level it was possible to suggest a causal flow between the appraisals and coping strategies. Figure 7 shows a possible causal flow in the coping process which appeared to have contributed to the positive outcome for the events in the resolution group that had perceived ineffective strategies . There was a higher mean rating of stress in the resolution group. and this may have been offset by the predominant appraisal of challenge. The challenge appraisal may have helped to maintain a positive perception of the event throughout the coping process. and ultimately contributed to the higher rating of effectiveness. The majority of the events in the resolution group had a reported wide repertoire, which may have meant that the participants had more strategies to choose from once ineffective strategies had been perceived as not helping to deal with the event. In the events that had occurred previously familiar strategies were always used, suggesting that knowledge of what would be effective contributed to the resolution of the problem. A higher mean number of coping strategies was used in the resolution group. This suggests that either that the combined use of more strategies was ultimately effective, or that there were more strategies used once reappraisal had occurred. There was also a different pattern of coping strategies used, and rational action was never perceived as ineffective, which suggests that this particular strategy contributed to the positive outcome. Reappraisal occurred in all events and it seems that this was necessary as a way of changing the ineffective strategies.

Figure 8 shows the possible causal flow in the coping process for the no resolution events. There was a threat appraisal, constraints. a narrow repertoire, a low number of coping strategies, a lower rating of effectiveness and less likelihood of reappraisal. It seems as though there was no one aspect or construct of the coping process which contributed to the different outcomes. It was the different combinations of appraisals and coping strategies which determined the outcome. Figures 7 and 8 show a theoretical

TABLE 5:   Descriptive data for the constructs in the coping process for the resolution and no resolution outcomes where ineffective coping strategies were perceived

Construct	TYPES OF OUTCOME	
	Resolution (n = 10)	No resolution (n = 7)
STRESS	x̄ = 75.4	x̄ = 61.8
CONTROL	x̄ = 39.5	x̄ = 37.1
PRIMARY APPRAISAL		
Threat	20.0%%	42.8%
Challenge	50.0%	28.5%
Threat/challenge	30.0%	28.5%
SECONDARY APPRAISAL		
Constraints	40.0%	71.4%
Wide repertoire	70.0%	28.6%
Occurred before	50.0%	71.5%
Familiar strategies	100%	80.8%
COPING STRATEGIES		
Number	x̄ = 5.7	x̄ = 4.1
Type	rational action	*distraction
	*relaxation	*emotional response
	*hostile reaction	
	*emotional response	
TERTIARY APPRAISAL		
Effectiveness	x̄ = 69.0	x̄ = 28.1
Reappraisal	100%	71.4%

*ineffective coping strategies
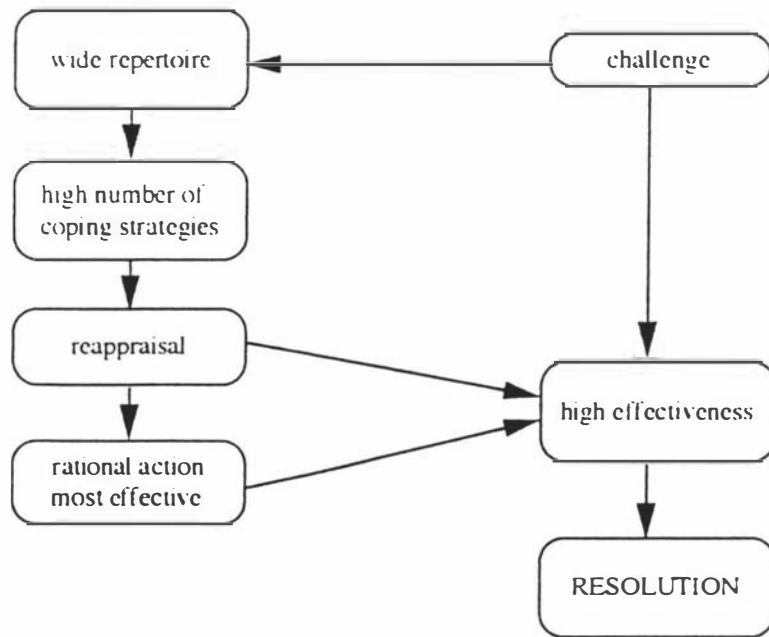
FIGURE 7: Diagram showing the possible causal flow between the constructs which contributed to a resolution of the problem despite ineffective strategies
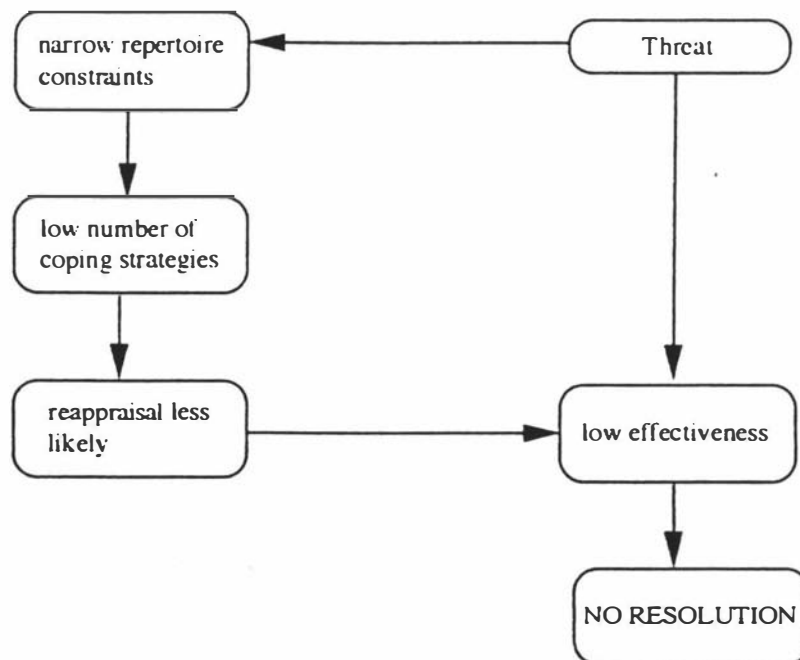
FIGURE 8: Diagram showing the possible causal flow between the constructs that contributed to no resolution of the problem when ineffective strategies were-perceived

causal flow of the appraisal and coping strategies that contributed to the differences in the coping processes. However. when the individual events (E & G) were examined it was evident that the cognitive changes that occurred. the changes to different coping strategies. and the way these interacted were influencing factors in the outcome. The participant in event E took the time to reappraise the situation and chose strategies which reduced his emotions and changed his cognitions. These changes led to a positive outcome. The participant in event G did not reduce her emotions and while there were some cognitive changes which helped her to deal with the situation. these were not sufficient to lead to a resolution of the problem.

Summary

There were differences in the coping process for the types of outcomes. The coping process for the resolution group was positive and this appeared to be influenced by the challenge appraisal, use of familiar strategies. and the pattern of coping strategies used. These flowed reciprocally to create a high rating of effectiveness which all led to a positive outcome.

It appears that the influencing factor in at least a partial resolution was the combination of a wide repertoire, a specific pattern of coping strategies and reappraisal. The influencing factor in a partial lack of resolution was the combination of low control and a threat appraisal. The combination of threat, low control. constraints, narrow repertoire, a specific pattern of strategies, ineffective strategies and less chance of reappraisal was likely to influence the total lack of resolution by creating a negative perception of the ability to deal with the event.

A comparison of the events in the no resolution group and those in the resolution group that had perceived ineffective strategies helped to clarify the influencing factors which contribute to a positive outcome. These factors appeared to create a relatively positive perception of the ability to deal with the situation and included a challenge appraisal. a wide repertoire, a high number of coping strategies used with one specific strategy viewed as effective, reappraisal and a high rating of effectiveness. The case studies showed that the continual changes that occurred and the way in which these differed, were also influencing factors in the outcome.

PRIMARY APPRAISAL AND THE COPING PROCESS

The current section examines primary appraisal (threat, challenge, threat/challenge) to determine if this appraisal has any major influence on the coping process.

Table 6 shows the data for each construct of the coping process in the three primary appraisals. The highest mean rating of stress was in the threat/challenge category and the lowest in challenge. The events in the challenge group also had the highest mean rating of control. and the ratings of control for the threat and threat/challenge appraisals were considerably lower.

There were differences between the primary appraisals in most of the aspects of secondary appraisal. The challenge category had the lowest percentage of events with constraints. and the highest percentage of events with constraints was in the threat/challenge group. The events in threat/challenge also had the most events with a wide repertoire. the highest percentage of events which had occurred before and of these events all used the same strategies as previously. In contrast. the events in the threat appraisal had the lowest percentage of events which had a wide repertoire. the lowest percentage of events which had occurred previously. and familiar strategies were not always used for these events.

There were similarities in the type of coping strategy used. as rational action and emotional response were used for more than half of the events in all primary appraisals. Positive thinking was used in the challenge and threat/challenge categories. while seeking help was used only in the threat/challenge group. Table 7 presents the mean number of each of the coping strategies in the primary appraisal categories. This table shows that the different primary appraisals elicited different patterns of coping strategies. On a comparative basis. in the threat/challenge category hostile reaction was used less frequently, and emotional response and wishful thinking were used more frequently than in the other primary appraisals. In the challenge category fatalism was used less frequently, and in the threat category the strategy of 'other' was used more frequently.

The events in the challenge category had the highest mean rating of tertiary appraisal. The events in threat/challenge had the lowest. and also had the most events with perceived ineffective strategies and reappraisal. More than half of the events were fully resolved in all the primary appraisals and the highest percentage of events that were resolved was in the challenge category. There was a similar percentage of events that were partially resolved and not resolved in the threat and threat/challenge appraisals.

Challenge appraisal

When the primary appraisal was challenge the perception of stress was moderate and the control appraisal was high. There were few constraints and the repertoire was wide for half of the events. Familiar strategies were used for all the events that had occurred

TABLE 6:   *Descriptive data for the constructs in the coping process for the different primary appraisals*

Construct	Threat (n = 19)	Challenge (n = 22)	Threat/challenge (n = 13)
	PRIMARY APPRAISAL		
STRESS	$\bar{x} = 59.8$	$\bar{x} = 47.7$	$\bar{x} = 69.8$
CONTROL	$\bar{x} = 40.4$	$\bar{x} = 71.5$	$\bar{x} = 42.6$
SECONDARY APPRAISAL			
Constraints	36.8%	13.6%	46.1%
Wide repertoire	39.0%	50.0%	69.3%
Occurred before	58.0%	63.7%	77.0%
Familiar strategies	72.7%	100%	100%
COPING STRATEGIES			
Number	$\bar{x} = 4.0$	$\bar{x} = 4.4$	$\bar{x} = 5.2$
Type	rational action	rational action	distraction
	emotional response	emotional response	emotional response
		positive thinking	positive thinking
			seek help
TERTIARY APPRAISAL			
Effectiveness	$\bar{x} = 68.9$	$\bar{x} = 84.0$	$\bar{x} = 60.0$
Ineffective	31.5%	36.3%	61.5%
Reappraisal	26.3%	31.8%	61.5%
OUTCOME			
Resolution	57.8%	81.8%	60.0%
Partial resolution	26.3%	9.0%	30.7%
No resolution	15.7%	9.0%	15.3%

TABLE 7:   *Mean number of each of the coping strategies used in the different primary appraisals*

PRIMARY APPRAISAL	COPING STRATEGIES													
	rational action	seek help	hostile reaction	fatalism	emotional response	positive thinking	distraction	relaxation	wishful thinking	humour	blame	faith	self adaptation	other
Threat	78.9	42.1	21.0	26.3	52.6	42.1	21.0	36.8	21.0	5.2	15.7	5.2	10.5	21.0
Challenge	81.8	45.4	27.2	9.0	59.0	54.5	22.7	31.8	18.1	27.2	22.7	9.0	22.7	0.0
Threat and Challenge	84.6	61.5	7.6	30.7	92.3	76.9	30.7	23.0	46.1	15.3	15.3	7.6	15.3	7.6

previously and this may have contributed to the high rating of perceived effectiveness and high percentage of events that were resolved. The cognitive coping strategy of positive thinking was used frequently. This strategy has a positive connotation and may have contributed to the overall effectiveness of the coping process. Approximately one third of the events had perceived ineffective coping strategies and underwent a reappraisal, suggesting that the appraisals, including the challenge appraisal, may have contributed to a positive outcome despite some perceived ineffective strategies.

Event H involved the participant having to interview and assess an unco-operative client. As well as a challenge appraisal she perceived the event as moderately stressful (57) with a high perception of control (70). These appraisals may have been influenced by the fact that this was not a new problem and that she was aware of choosing the strategies that she used as these had "been effective many times before," and she considered that she had a wide repertoire. She first became aware that she was under stress when she realised that her heart rate had increased, her palms were sweating, her anxiety had increased and her thinking had "speeded up." Awareness of these reactions led her to use the first coping strategy of rational action where she thought objectively about the problem and determined that she "needed to decide to carry out relaxation and thought stopping." She then used the next two coping strategies together: emotional response, which "stopped the anxiety because it gets in the way of objectivity;" and relaxation, using deep breathing. She used the relaxation as soon as she realised that the real problem was anxiety. She stated that all the strategies contributed to the effectiveness of dealing with the situation and she rated relaxation at 100. She stated that all her reactions altered as she was doing the relaxation, her anxiety disappeared and the problem was resolved.

The participant clearly identified her emotional reaction of anxiety as the problem which needed to be managed and she used strategies which she knew would be effective to reduce her anxiety. She had the resources of anxiety management skills to deal with the situation effectively and it is likely that knowing she had these resources influenced her appraisals of challenge, control and stress. So it seems as though the coping process influenced the challenge appraisal.

Threat appraisal

The events that had a threat appraisal had a moderate perception of both stress and control. All these appraisals may have continued throughout the coping process to influence the moderate mean rating of perceived effectiveness. Approximately one third of the events had constraints and just over half of the events had occurred previously. The majority of events had a narrow repertoire reported which would have contributed

to only two coping strategies being used in more than half of the events. There were approximately one third of the events which had perceived ineffective strategies and the majority of events were resolved or partially resolved.

Event I illustrates a situation which involved a threat appraisal and was where the participant was thinking about her relationship with her partner. She had a moderate appraisal of stress (47) and this may have been partly because she "didn't have to take immediate action, not necessarily a crisis." The threat appraisal and a low perception of control (31) may have been influenced by the fact that the particular problem was a new one and because of this she considered that she had a narrow repertoire as it was "a new set of problems so needed to work out new ways." The repertoire may have been reduced further by the constraints of wanting to discuss the problem with someone else but she did not think this was appropriate and she did not feel able to talk to her partner. Her first coping strategy was emotional response which she used for several hours and she found this ineffective. She then used rational action by analysing the problem and in the course of doing this stated that she changed from analysing the situation to looking at herself and so changed to using two more strategies: the 'other' strategy by withdrawing into herself; and self-adaptation where she looked at her own strengths and weaknesses. She felt angry and sad for several hours and stated that she became increasingly apathetic and listless. She reappraised the situation and "refocused thoughts from us to me," and this had the effect of altering her emotions to "feeling resigned but uncomfortable." It was this feeling of being uncomfortable which let her know that the coping strategies had been ineffective and she stated that the "original problem had not gone away and no further toward resolution."

It is likely that the coping process influenced the appraisal of threat in this event, as was the case in the preceding example (event H), rather than the converse. The constraint may have maintained the threat appraisal by preventing effective coping strategies from being used, and the strategies that were used may have maintained the threat appraisal by their ineffectiveness. The new problem and the need to find new solutions may also have contributed to the appraisal of threat.

Threat/challenge appraisal

The events with a threat/challenge appraisal had a high mean rating of stress and a low rating of control. Nearly half of the events had constraints and approximately seventy percent had a wide repertoire. The majority of events had occurred before and of these familiar strategies were used in all. There was a high mean rating for the number of coping strategies that were used and a moderate rating of effectiveness. Nearly two

thirds of the events had perceived ineffective strategies and reappraisal and the majority of the events were resolved or partially resolved.

Event J was a personal one which the participant described as doing a whole lot of tasks before getting to a meeting on time. He perceived the event as both a threat and a challenge. His first response was to use the coping strategy of hostile reaction which he stated he used automatically and reacted badly, at the same time feeling angry and threatened. The participant considered that there was a constraint as he had wanted to the things together with his wife and this appears to have contributed to his decision that this strategy was ineffective as it caused hostility and bad feeling all day. He then reappraised the situation, "felt bad about the anger and decided to get on and do the tasks rather than blame anyone." Presumably the primary appraisal now changed to challenge, with a moderate perception of stress (52) and the perception of control was relatively high (72). He then used rational action by doing the tasks quickly one at a time. At the same time he used emotional response as he "kept my anger contained at everything being time consuming." He also used positive thinking "that it would all be over soon" and he determined that these strategies were effective, especially analysing it and taking direct action to solve it.

In this event the secondary appraisal process was instant and produced the automatic response of using a coping strategy that was ineffective. It is not possible to determine whether the appraisal of threat occurred just before or just after this automatic response, but it appears that he reappraised the event to one of challenge and he decided that he needed to change his coping behaviour. Once he used different strategies dealing with the situation was effective and there was a positive outcome. In this event it appears that primary appraisal, especially the change from threat to challenge, influenced the coping process so that he changed the coping strategies and these were effective.

Comparison of the primary appraisals

The events where there was a challenge appraisal had the lowest rating of stress, highest rating of control, highest rating of effectiveness and the highest percentage of events that were fully resolved. This suggests that these appraisals and outcome either influenced or were influenced by the positive nature of the challenge appraisal to create a relatively positive and straightforward coping process. In contrast, the threat/challenge appraisal had the highest rating of stress, highest percentage of events with constraints, a wide repertoire and where a similar problem had occurred previously, ineffective strategies and reappraisal. There was also the highest mean number of coping strategies and the lowest rating of effectiveness.

Figure 9 presents a diagrammatic view of the differences between the primary appraisals and the possible flow between primary appraisal and the other constructs. In the threat appraisal the influencing factors appeared to be the low control, a narrow repertoire and the pattern of coping strategies which contributed to moderate effectiveness.

The threat/challenge appraisal had the most negative coping process. Figure 9 shows the possible aspects which were linked to the threat elements, and the possible aspects that were connected to the challenge elements. Presumably the threat appraisals and the aspects connected to it (high stress, low control, constraints, ineffective strategies and a partial resolution) had more influence over the coping process. It seems as though the high stress, low control, constraints and ineffective strategies combined and interacted to create a negative coping process. Events C, F, G and J all had a threat/challenge appraisal and one of the common factors between these events is that they all involved a situation where the participant was dealing with other people and their reactions. In these events the threat appraisal appeared to be in the initial stages and the challenge appraisal appeared to occur once the participants had found more positive and effective ways to deal with the event. This suggests that the initial appraisal may be the one with the most influence on the coping process. Where the two primary appraisals occurred they appeared to be sequential rather than simultaneous. It would be necessary to have more precise information as to when the appraisals occurred to be able to ascertain this more accurately.

Summary

There were differences in the coping process for the primary appraisals of threat, challenge and threat/challenge. The positive nature of challenge appeared to influence the coping process so that the positive perception was continued through to tertiary appraisal and outcome. In contrast, a threat/challenge appraisal appeared to create a negative influence on the coping process, perhaps because the threat appraisal occurred first and this initial appraisal continued to influence the coping process despite a later challenge appraisal. It is not so clear why a threat appraisal appeared to create a moderate rather than a negative influence on the coping process.

These results show that it was the combination of the appraisals and coping strategies which influenced the coping process and ultimately the outcome. While the single construct of primary appraisal clearly had an influence, it was the manner in which primary appraisal interacted with the other appraisals and coping strategies which contributed to the process of dealing with an event.
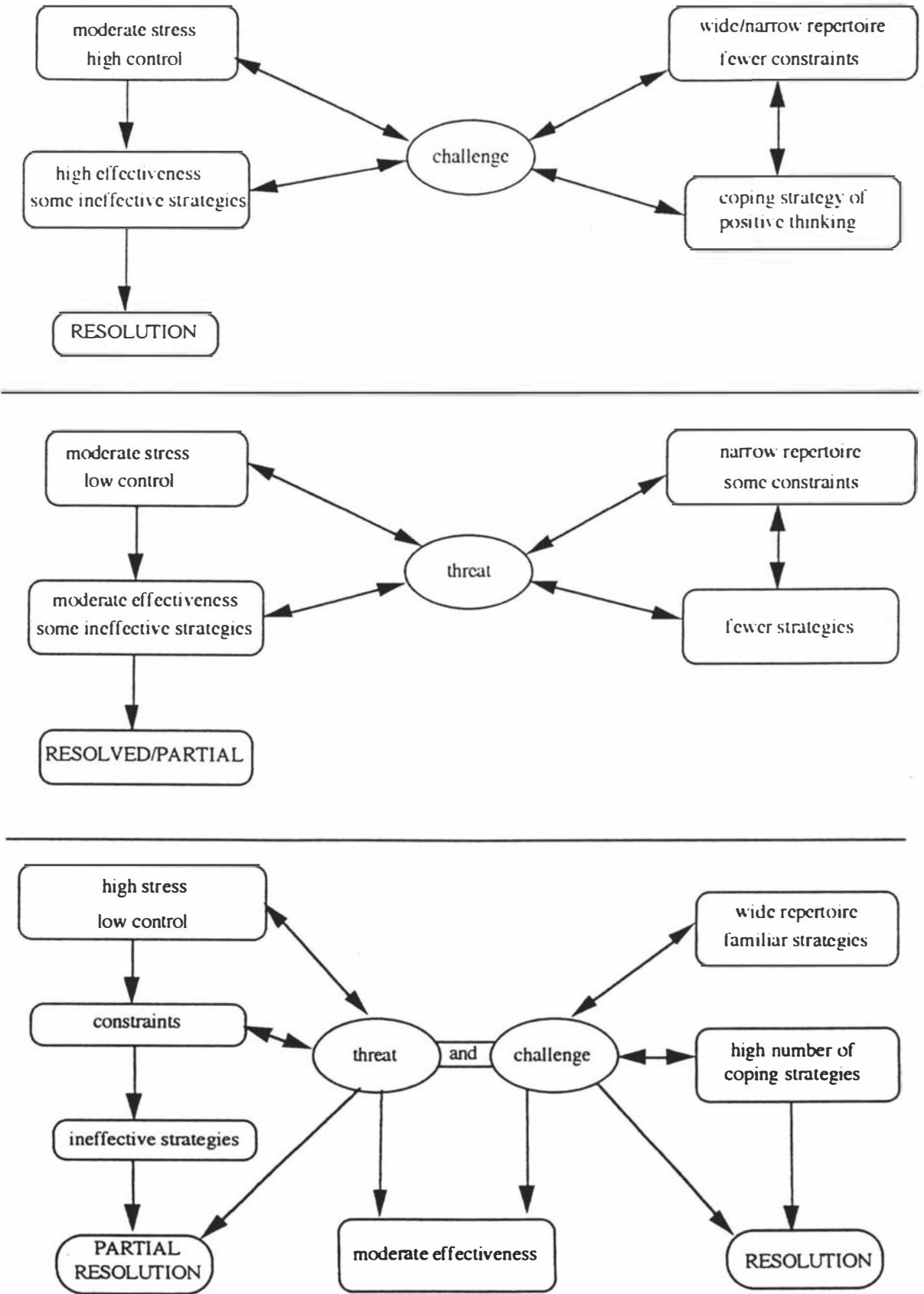
FIGURE 9: Diagram showing the differences in the coping process between the primary appraisals

CONCLUSIONS

Six main conclusions can be drawn from the results. First, no single construct in isolation appeared to have a major influence on the coping process. It was the specific combinations of appraisals and the patterns of coping strategies which influenced the coping processes differently and ultimately contributed to different outcomes. There were reciprocal influences occurring and these influenced the continual flow between the constructs of the coping process.

The second conclusion is that the patterns of the contributing appraisals and coping strategies that emerged appeared to create either negative or positive influences on the coping process. The coping process that was experienced negatively appeared to be influenced by a threat appraisal and a perception of low control, with constraints and a narrow repertoire. The pattern of coping strategies used, in this case, was a combination of rational action, emotional response and distraction, and ineffective strategies were perceived. Presumably the negative appraisals of threat and low control continued throughout the coping process and influenced tertiary appraisal, suggesting that a negative appraisal influences a negative outcome.

The positive coping process was dominated by a perception of low stress, challenge, reappraisal, high tertiary appraisal and resolution of the problem. The pattern of coping strategies involved was rational action, emotional response, positive thinking and seeking help. Secondary appraisal did not appear to be an important influence, it seemed to be the other appraisals which were the influencing factors, whereas two aspects of secondary appraisal did appear to be influential in the coping process that was experienced negatively.

Third, there were more differences than similarities in the coping process when the sub-types of events, outcome and primary appraisal were compared. The results suggest that the differences were the variable aspects of the coping process. The differences helped to ascertain which constructs may be influencing the coping process from whichever perspective was being examined, such as the types of events. For example, the constructs that differed between the distinct and organisational events were the appraisals of stress and control, secondary appraisal and the coping strategies used. The specific differences suggest that in the distinct events the influencing factors were the low stress, high control, a narrow repertoire and the low number of coping strategies used, whereas the influencing factors in the organisational events were moderate stress and control, a wide repertoire and a high number of coping strategies. There were some similarities in the coping process when the sub-types were compared. These similarities suggest which constructs, or aspects of constructs, were consistent. For example, in the

groups of events that were considered to have a coping process that was experienced negatively, the common aspects in all of them were a threat appraisal, constraints and ineffective strategies. This suggests that these aspects were determinants of a coping process that was appraised and experienced in a more negative manner.

Fourth, changes occurred in the coping process as an event evolved. The ten case studies that were described showed the continual change and flow in the coping process in more detail. The main changes were cognitive as every event, except Event A, underwent some form of cognitive reappraisal. This had a major influence on the coping process as at the very least it allowed the participants to consider the event in a more positive or bearable light. When these cognitive appraisals were combined with emotional changes it often meant that the participant was able to feel better about the situation even if it did not resolve the problem. There were also changes in the use of coping strategies. Multiple coping strategies were used in all but two of the fifty-four events and the ten events described showed that these altered from one to another as the event unfolded, often in a reciprocal process with appraisal or reappraisal. It seems that the continual change and flow influenced how people coped with daily stressful events.

Fifth, appraisal clearly played a major role in the coping process. It appeared that it was the combination of the different appraisals which was influential, rather than any specific appraisal. For example, the results for the different primary appraisals showed that while these had some influence on the coping process it was the primary appraisals combined with the stress, control, secondary and tertiary appraisals which had the major influence. The changing nature of the appraisals was a key factor. As the events described showed, there was often a continual changing of cognitive appraisal and generally this reappraisal involved a change to a more positive or manageable thought and this then altered the coping process. Reappraisal also appeared to be influential in the coping process. Reappraisal was defined specifically as another appraisal that occurred once a strategy had been perceived as effective. This definition provided clarity for data analysis purposes, but it is clear that reappraisal has a much wider role than that definition permits. There was some suggestion that the initial appraisal may be an important influence in the coping process as there appeared to be a link between the initial appraisal and the outcome.

Finally, the data supports the notion that coping behaviour is complex, flowing and multifaceted. The changes in appraisal and the coping strategies, illustrated by the ten case studies described, provided support for coping as a flowing and changing process. Part of the complexity of the coping process is the variability which was evident in the present study. The ten case studies illustrated the variability of coping behaviour as each event had a different coping process, even in seemingly similar situations. For

example, events B and E were both dealing with organising time at work, and while there were some similarities the coping process for each event was different. The case studies and the nomothetic data confirm that there are many factors involved in how people deal with a stressful situation. The manner in which these influencing factors interacted with each other and influenced the outcome varied considerably.

The questionnaire was structured to assess the many different aspects of the coping process and to capture its complexity. Generally, the information gathered on the coping process using this method appears to have been effective. The results showed that a finer-grained analysis provided detail concerning the coping process which is not available through using traditional methodologies. This suggests that the alternative methodological framework developed for the present research has the potential to collect and analyse data in a manner that fits the theoretical assumptions of the coping process.

The aim of the daily events study was to examine the changing nature of the coping process. The results showed some of the key features and drew some conclusions concerning the coping process. However, some difficulties emerged and these issues are discussed in chapter six and a proposal is outlined for a further study.

CHAPTER SIX:

TRANSITION TO THE SURGERY STUDY

The data for the daily events study was collected on the assumption that the Daily Record would provide information mostly concerning discrete, every day situations but may detect some major or crisis type events. The majority of the events described in the current study were classified as discrete and several conclusions were drawn about the coping process from these events. However, there were several problems with the approach of using daily stressful events.

First, relying on data from discrete events provided a large amount of information that was so variable that it was difficult to determine a method of analysis that could examine patterns clearly on a nomothetic level, and explore the coping process systematically. The case study approach did provide a method which examined the complexities of the coping process in more detail, but there was considerable variability between the events which made it difficult to compare them. The results of the daily events study showed that there were some consistencies in the coping process for similar types of events and this suggests that assessing one type of event may produce more manageable data for nomothetic analysis. Stone and Neale (1984) in their study of daily events, found that the participants used the same coping strategies to deal with the same event that was reported over several days. It is likely that there is consistency in other aspects of the coping process which could be captured by focusing on one type of event. Consistency would help to refine the data analysis and contribute to an understanding of how any consistent factors influence coping as a process, especially in comparison to the changing factors.

Second, as discrete events are time limited the changes in the coping process were not captured as adequately as they might be for an ongoing event with a longer duration. A longer duration would provide the opportunity for repeated measures to be used and these would capture the coping process over time more adequately. Stone and Shiffman (1992) maintain that there is not a sufficient number of studies which measure the coping process over time using repeated assessments. Stone et al. (1992) suggest that repeated measures need to be used so that the dynamics of the coping process can be assessed.

Third, there were inconsistencies in the rate and type of responses to the Daily Record. Some participants responded for fourteen consecutive days no matter how minor the event and consequently data was collected for some events which were perceived as minimally stressful. Several participants did not have a stressful event every day and so

did not fill in a questionnaire for those days. Further, some participants experienced difficulty in describing certain events. One found it difficult to describe a major crisis and another thought it was difficult to describe minor events. The ability to describe an event every day may be affected by the participants' awareness, the length of the questionnaire, the instructions they were given, or the severity of the stressful events.

Fourth, sometimes participants were monitoring an ongoing event, but a single incident would become more important for one particular day (i.e. the ongoing event was not the most stressful event of the day), so data for the ongoing event was lost. It perhaps needs to be either discrete or ongoing events which are monitored, but not both. A difficulty in using daily events is the confusion between ongoing and discrete events. Interaction between them must occur, so the problem is how best to measure this interplay, or is it preferable to make a choice between them?

It is true, as Lazarus (1982) stated, that few stressful events are straightforward and distinct. The type of event that was described in the daily events study depended on what was happening in the life of the participants and made the interaction between ongoing and discrete events inevitable. For example, some participants consistently described work related events. So is a stressful working environment an ongoing event with discrete events happening within that, or are the discrete events seen as isolated situations? Another participant was in the recuperating stages of a major operation. Most of her events were connected to that and dealing with everyday living was problematic as a result of her surgery. So it seems that discrete events can occur as a consequence of an ongoing event and these can be described, whereas some of the consequences of a continuing event would be more difficult to detail, for example, the psychological recovery from a loss.

The advantage of focusing on a well-defined ongoing event is that the changes in the coping process can be monitored over a longer period of time. To track an ongoing event from beginning to end would require longitudinal data. The timing of the data collection is flexible. It can be monitored for one event for as long and as often as necessary. To realistically collect data for ongoing events only would require: a specific population who were experiencing an ongoing event; repeated measures; acknowledgement that discrete events would occur and overshadow the ongoing event; access to participants at the onset of the event to capture the whole coping process; the data collection would have to be time limited and the whole process may not be captured. There appear to be many practical problems in focusing on an ongoing event. The most realistic method would be to use a specific population who knew a stressful ongoing event was about to occur, for example, surgical patients.

The main advantage in focusing on discrete daily events is that the data can be collected cross-sectionally, rather than longitudinally. A daily measure may not always be possible when participants do not lead particularly stressful lives as they may not have a sufficiently stressful event each day. However, the data does not have to be collected daily for discrete events, it can be gathered as sufficiently stressful incidents occur. It may be possible to request that participants collect a certain number of stressful events and some may have several per day, others only two or three a week. This would need to be monitored to ensure that only events which were sufficiently stressful and meaningful to the participants were described.

The inclusion of temporal factors was an exploratory aspect of the present research. In the daily events study the information collected on time did not make a major contribution to the results that were reported, i.e. the preliminary analysis showed that none of the temporal factors measured influenced the coping process. However, the gathering of information concerning temporal factors did make a contribution to the daily events study. It aided the sequencing of events and provided a context in which the changes that were reported could be described. When coping is viewed as a process, sequence of the experience is an essential element to measure so that the movement through the process can be monitored. The changes over time in the daily events study were not captured in a precise manner as the duration of the events was too short. To use the temporal factors to their best advantage the following factors concerning a specific stressful event need to be considered:

First, the time span of the event needs to be of sufficient duration to monitor the changes that occur as the event progresses. The ideal event would be one which has clearly defined stages: knowing the event is going to occur; dealing with the event itself; and a definite outcome. Examples of events which meet this criteria are surgery, examinations, court appearances and pregnancy.

Second, the event needs to be clearly defined as ongoing so that the changes in the process can be monitored. If access to participants can be gained at the onset of an ongoing event, and there is a defined outcome to the same event, then the whole process may be captured. From the examples above, examinations, court appearances and pregnancy all would allow a focus on a well defined stressor, but they all have daily consequences, i.e. the participants would be continuing with their daily lives as they dealt with the defined stressor, so there would be inevitable interaction between the ongoing event and the daily events. The ideal situation is one where a well-defined ongoing event can be monitored with no interference from daily stressors. It is doubtful that such an event exists, but surgery is an ongoing event where the daily stressors

would be minimised as the participants would have a temporary inability to maintain a normal lifestyle.

Third, the stressful event needs to have well-defined phases. Carver and Scheier (1994) discuss the notion that coping behaviour may differ from phase to phase. They assessed the coping behaviour of students before and after an exam and after the results were known, and found that the students perceived the stressor differently at each stage and altered their coping behaviour accordingly. Stone et al. (1991) discuss the importance of researchers defining the phases of an event clearly, otherwise participants may define their own phases at which to report their coping behaviour, and this does not provide an adequate comparative basis. The clear definition of phases allows some of the constructs to be clarified. For example, an ongoing event which has definite phases can offer assumptions about the most likely primary appraisal at any given point of the unfolding process. For example, in surgery there is anticipation time preceding the event (threat), the actual operation (harm), and the recuperation period (challenge).

Fourth, there needs to be a clearly defined outcome. For many events there is no obvious conclusion, but others have an indicator by which return to normal functioning can be gauged. For example, surgery has a medical clearance, pregnancy has the birth of the baby, examinations have the results and court appearances have the judgement.

The aim of the present research is to capture the complexity of the coping process by examining it as a multi-faceted, flowing, changing phenomenon. The results from the daily events study showed that using discrete events did not allow adequate assessment of the changes in the coping process and did not capture the coping process over time in a conclusive manner. Repeated measures of the same event need to be used to achieve the aim of the present research, and the event needs to be ongoing to meet the criteria stated above. The only event mentioned in the examples above which meets all the criteria is surgical intervention. The experience of undergoing and recovering from surgery has the potential to monitor the process before, during and after the event. A person generally knows ahead of time that he or she is to have surgery, so the coping process can be monitored during the anticipatory phase. The hospitalisation period often means that a person is distanced from other stressful events which occur in daily life, so there can be a clearer focus on how a person dealt with surgery. There is a recuperation period during which stressful events can be measured as they arise, and there is a medical clearance which provides a definite outcome. The second study of the present research examined the coping process over time using surgery as the defined stressor.

METHODOLOGICAL CONSIDERATIONS

The daily events study showed that the methodological framework developed for the present research had the potential to capture the coping process in a way that accessed some of the changing aspects. As the methodology had no known precedent it was expected that some refinements would be necessary, so a second study had been anticipated from the outset of the research. Two main difficulties emerged. The first was the nature of stressor chosen. This has already been discussed and was expected to be largely overcome in the surgery study.

The second difficulty encountered, which could be readily improved, was the method of data collection. The case study approach used in the daily events study showed that this unit of analysis had the potential to provide detailed information on the coping process, but the questionnaire was very structured and this limited the amount of qualitative data which was gathered. The design of the present research necessitates a structured approach so that the different constructs of the coping process can be defined and assessed in a systematic manner. However, there is value in using an alternative form of data collection to gather any additional information that may be important in the coping process. It was decided that data in the second study would be collected by interview, in addition to the questionnaire.

THE SURGERY STUDY

In the present study the experience of surgery was used as the stressor to examine the coping process and therefore there was no research interest in the surgery per se. Surgery is an appropriate stressor for examining the coping process for several reasons. First, surgical intervention meets the criteria required to investigate the changes over time. It is also considered a stressful experience for most people. Gil (1984) states that the experience is stressful as individuals are unsure how much stress and pain will be involved and she cites research which provides evidence for the increase in stress during the presurgery stage. As with any stressor, coping is considered to mediate this initial stress and the outcome of the surgery. Researchers have investigated the provision of specific interventions prior to surgery (e.g. Wells, Howard, Nowlin, & Vargas, 1986; Scott & Clum, 1984), to help individuals deal with their surgery, and have generally found that anxiety can be reduced through using these interventions.

Second, the nature of surgery provides the opportunity to explore the transactional perspective of coping as a process and this has also been suggested by other researchers. There are some theoretical papers which propose models of coping with surgery which are closely related to the theoretical framework for the present research.

For example, Gil (1984) adopts essentially a transactional perspective adapted to the particular stressor of what she terms "invasive medical procedures." Breemhar and van den Borne (1991) base their model on Lazarus and Folkman's (1984) model, but their emphasis is on how perceived control influences the recuperation from surgery. However, the studies that have been undertaken into the specific area of coping with surgery have followed similar methodology to the wider area of research into coping behaviour and focus mostly on coping strategies (e.g. Cohen, 1980; Cohen and Lazarus, 1973; Martelli, Auerbach, Alexander, & Mercuri, 1987), rather than on coping as a process.

Third, surgery has clearly defined phases which provides the opportunity to investigate changes from phase to phase. Peterson (1989) suggests that coping with surgery may vary according to the phase of the stressor and suggests that it is important to specify the phases and the different constructs that may be involved in dealing with the event of surgery. Scheier, Magovern, Abbott, Matthews, Owens, Lefebvre and Carver (1989) investigated three stages of coronary by-pass surgery over a period of six months. Their focus was on the participants' outcome expectancies and they found that those who were more optimistic about the outcome of surgery recovered more quickly from their operations. Carver, Pozo, Harris, Noriega, Scheier, Robinson, Ketcham, Moffat and Clark (1993) investigated five phases, from the day prior to surgery through to a follow-up twelve months later, of women who had had surgery for breast cancer. They measured coping strategies and the levels of distress and found that the coping strategy of acceptance was an important indicator of less distress. They also found that some coping strategies were related to positive outcomes and others were related to negative outcomes.

The research that has investigated different phases of surgery has contributed to the understanding of how coping strategies are used over time, and the changes that occurred at the different phases. The focus continues to be on only one or two aspects of coping behaviour and there has been no known research into the entire coping process that people experience when they deal with their surgery.

Aim

The aim of the present study was to use the specific event of surgery to investigate changes in the coping process over time. Five phases of the surgery event, over an eight to nine week period, were defined to achieve the aim: the anticipatory phase approximately two days prior to surgery; the actual surgery phase during hospitalisation; the recuperation phase approximately two weeks following surgery; the recovery phase, approximately four weeks after the operation; and the surgical outcome

phase after a medical clearance had been given, usually six weeks following the actual surgery. Gynaecological surgery was chosen to provide an homogenous group of participants. The criterion for participation was surgery which had a minimum six week recovery to ensure there was sufficient stress. at least at some of the phases. and to provide a sufficient duration to monitor the coping process.

Method

Participants

The participants were nine women who underwent gynaecological surgery. The age range was from 40 to 56, the mean age was 47.6 and the median age was 45. Five women had hysterectomies, two had repair surgery, one had a hysterectomy and a repair, and one had triple surgery involving a hysterectomy, a repair and carpal tunnel surgery. Three of the women had medical complications after surgery which delayed their recovery progress. All the participants who took part in the first interview completed the research.

Participants were recruited through a gynaecologist who performed surgery for private patients only. The gynaecologist's receptionist asked women who were potential participants if they would agree to have their name, contact address and phone number passed to the researcher. The researcher then sent a letter and information sheet explaining the research (see Appendix D) and informed them that they would be contacted by telephone in a few days for their decision. Once they had agreed to participate a suitable time was arranged for the first interview.

Materials

A modified version of the Daily Record (see Appendix E) was used for the interviews and the questionnaires. The interview had the same structure as the questionnaire so these were different methods meeting the same ends. In the interviews the researcher asked the questions from the questionnaire and the participants completed the visual analogue scales. The interviews allowed for probes to provide further exploration of the coping process and gather more detailed information. Two interviews were held before the participants completed the questionnaires on their own. This provided a lead into the complexities of the coping process, and the questioning by the interviewer was paced to individual requirements, plus any difficulties with interpretation were explained. Using some questionnaires was a time saver and also allowed the participants more time to consider their responses on their own. All questions focused on issues arising from the context of surgery.

As discussed in chapter four, there were some difficulties with the questionnaire, and there needed to be some adjustments to adapt it to the event of surgery. The following is a summary of the changes that were made to the questionnaire.

Coping strategies: The measure of coping strategies used in the daily events study was an adaptation of McCrae's (1984) scale. The original scale was developed for use as a much larger checklist and only some of the items were used for the daily events study. The fifteen different strategies used in the daily events study is a lot for people to consider on a repeated basis in the same event, and not all of the strategies were considered to be relevant for dealing with surgery. Stone and Neale's (1984) measure of coping strategies is considerably shorter, and brevity is important when participants are responding several times to the same event. It was decided to change the measure of coping strategies to that developed by Stone and Neale. Their open-ended format was retained where the participants could report their actual cognitions and behaviours in the use of the coping strategies. Stone and Neale's scale consists of eight strategies: distraction; situation redefinition; direct action; catharsis; acceptance; seeking social support; relaxation and spiritual comfort. The 'other' category was also included. The definitions of these strategies were altered to suit the experience of surgery.

Primary appraisal: Although Lazarus classifies harm/loss as one appraisal, it may be that these are separate and constitute different meanings, especially in the event of surgery. The Collins Dictionary (1986) definition of the two words is markedly different. Loss implies that something or someone has gone forever and this has resulted in disadvantage or deprivation which cannot be retrieved, whereas harm implies that some damage, disappointment or injury has been done to the person. Examples of loss would be death, divorce, losing a job or perceived vital organs in surgery. Dealing with the consequences of these losses (i.e. learning to live without the lost organ) would presumably be the main coping thrust but the other primary appraisals would also be present at times. For example, in surgery the loss is the removal of the organs, but there would also perhaps be physical damage to the body (harm), fear of the actual surgery (threat) and positive gains for the future (challenge). Examples of harm would be personal injury or illness, or damage to self-esteem. Dealing with the consequences of these harm events would focus on learning to live with the altered circumstances, so in surgery it may be adjusting to the temporary physical damage, but the feeling of deprivation would not be as great as it is in loss as there may be a chance of recovery, so the coping processes may differ. It seems then that there may be a basis for separating harm and loss into two appraisals. In the questionnaire for the surgery study four primary appraisals were assessed (harm, loss, threat, challenge).

As discussed in chapter four, the questions for primary appraisal did not assess the appraisal as it was intended. The wording was too indirect to gain adequate responses and there was no opportunity for the participants to comment on the appraisal. The following changes were made. First, it was decided to ask participants directly about harm, loss, threat and challenge to gain a more direct response. Second, participants were asked to comment on, for example, how threatening they found the particular phase of surgery and what it was they found threatening. Third, visual analogue scales were added to provide a measure of which of the primary appraisals were perceived as more dominant and to provide a measure of change over time.

Secondary appraisal: It did not seem necessary to change the questions for constraints or repertoire. As the event was specified, the participants were asked at the first interview only whether or not they had had previous surgery to ascertain the history of the event. To determine the history of coping strategies they were asked if any of the strategies they used were new.

The question for the awareness of the choice of strategy was altered to a more direct request to nominate the strategies that were used automatically and those that were thought about before they were used. This was to ascertain whether the awareness the participants had of choosing their strategies made any difference to the coping process.

Tertiary appraisal: As discussed in chapter four there were difficulties with the questions for tertiary appraisal. One reason was that the focus was on one strategy only. The questions were changed so that the participants considered all the coping strategies they had used, and specified which ones were effective and which ones were ineffective. They were also asked which strategy they found the most effective and which one they found the most ineffective. In addition, they were asked how effective they found a combination of strategies.

Control and stress: In addition to the visual analogue scales, the participants were asked an open-ended question to provide an opportunity to describe their perception of control and stress for the particular phase of the surgery event.

Reactions: In the daily events study reactions were considered part of the measure of outcome. In the surgery study repeated measures provided the opportunity to focus on reactions as a measure of change, so it was decided to use a more structured assessment. The emotional reactions emerged from the daily events study as the most frequently reported of the reactions, so the decision was made to use a standardised measure of emotions. The Positive and Negative Affect Schedule (PANAS) developed by Watson, Clark and Tellegen (1988) was chosen. The measure consists of a 5-point rating scale,

with ten items measuring the intensity of positive emotions and ten items assessing the intensity of negative emotions. The inclusion of both positive and negative emotions was considered important in the coping process as it is assumed theoretically that positive emotions are associated with the appraisal of challenge, and negative emotions are related to threat appraisals.

The cognitive and physical reactions measured consisted of those reactions that were considered relevant to the surgery event. The physical reactions included ratings of pain, nausea and lack of energy. The cognitive reactions were derived from those mentioned by the participants in the daily events study, and included ratings on the lack of concentration, ruminative thoughts, confused thoughts and unrealistic thoughts. The cognitive and physical reactions were also rated on a 5-point scale measuring intensity.

Outcome: Lazarus and Folkman (1984) consider that the type of outcome for short-term stress is different to that for long-term stress. As the surgery event was expected to produce long-term stress the questions concerning outcome were based on their theoretical notion that social functioning, morale and physical health are the important indicators. The participants were asked open-ended questions on these three factors.

Temporal factors: As repeated measures were used to assess change over time there was no need to include any specific questions relating to temporal factors. The repeated measures reported natural sequential time, and the decision was made not to include psychological or chronological time as these had not been found to be influential in the daily events study, and also were not considered so relevant for the data analysis of an ongoing event.

Procedure

Data was collected through three tape-recorded interviews and the completion of two questionnaires. The data for one participant was collected entirely by interview as she had difficulty understanding some of the questions and articulating some of the responses. The first interview with the participants was held two to three days prior to the operation. The researcher answered any questions the participants had concerning the research. They then completed the informed consent form (see Appendix F). The women were then interviewed and were asked to think about how they were dealing with the anticipation of surgery during the interview.

The second interview took place a few days after each participant's return home from a period of five to six days in hospital. The format of the questions remained the same but the focus changed as the women were asked to consider retrospectively how they dealt with their period of hospitalisation. At the end of the second interview participants were

given two questionnaires to be completed during the period of recuperation to describe how they were dealing with recovery from their surgery. These were dated by the researcher to be completed two weeks after surgery and four weeks into the recovery period.

The third interview was held once medical clearance had been given by the surgeon, seven to nine weeks after surgery. The women were asked to describe whether or not they considered that they were still needing to deal with the surgery. If they responded affirmatively they were given a full interview with the same format as the first two interviews but the focus was on how they were currently dealing with the surgery. Two participants were given a full interview. The remainder were asked to complete the visual analogue scales, ratings of emotions and were asked the questions on outcome. This was to provide a measure of change in these aspects of the coping process after the surgical outcome. All the participants were asked to briefly describe the process retrospectively.

A final session was held once each participant's data was summarised. This session also included an explanation of the theoretical aspects of the research, a debriefing and a summary of how she dealt with the process.

Pilot study

A pilot study was conducted with three women participating. They went through the same procedure as the participants in the main study. The main objective was to test the questionnaire and interview for the relevance to surgery and the ability to gather data that could be analysed in a manner that would provide information about the coping process over time. Two changes were made as a result of the pilot study. First, the pilot study used the PANAS scale (Watson, Clark & Tellegen, 1988) to assess emotions and this was found to be largely irrelevant for the emotions involved in the surgery process. They were replaced by twenty emotions that emerged from the daily events study, and these included some of the relevant emotions from the PANAS scale. The thirteen negative emotions included were afraid, angry, anxious, guilty, shocked, agitated, annoyed, apprehensive, depressed, embarrassed, frustrated, irritable, upset. The seven positive emotions included were confident, eager, excited, hopeful, pleased, happy, relieved. The use of a 5-point scale was retained.

Second, there was an insufficient number of open questions and the closed questions did not offer sufficient opportunity to provide information which was within the participants' framework of coping. One of the participants in the pilot study commented:

"As is common with questionnaires which are mostly closed I feel that I am having a perspective or framework imposed on me but which is not actually quite real and does not really fit my meaning system."

In light of her comment and realisation that additional information could be gathered which may be important to the coping process. more open-ended questions were added. Most of these questions were designed to obtain information on the cognitive processes that were involved in coping with the surgery event.

Ethical considerations

The surgery study was approved by the Massey University Human Ethics Committee. It was acknowledged that the women were asked to participate in the research during a period of physical discomfort and reduced quality of life. The ethical concerns were aimed at reducing the risk of further discomfort. To minimise the risks. no women undergoing emergency operations or severe life threatening surgery were asked to participate.

The participants were fully informed about the research and all signed an informed consent form. Their right to withdraw at any time was emphasised, but all participants completed the research requirements. It was emphasised that the researcher had no medical expertise, and when participants raised concern over their physical condition they were encouraged to take responsibility for their own health and to take the appropriate action. There were no serious ethical difficulties encountered throughout the study. There were times when minimal psychological distress occurred for some participants. This was anticipated, and the researcher had the necessary clinical skills to discuss the situation with the women. and help them take the most appropriate action.

CHAPTER SEVEN:

DESCRIPTIVE RESULTS FOR INDIVIDUAL CONSTRUCTS

The design of the surgery study was complex as several perspectives needed to be considered for the analysis. There was the examination of the processes that the participants reported for each of the constructs and their experiences of the coping process as a whole. There was the exploration of the coping process during each phase and over time. In addition, the data could be examined for the participants either individually or as a group.

To cover all of these perspectives the results are described in the next three chapters using three different approaches, with an increasingly fine-grained analysis with each chapter. The data was collected qualitatively and quantitatively using repeated measures over five phases. The quantitative data was summarised using descriptive statistics. The procedures followed for summarising the qualitative data were based on those suggested by Miles and Huberman (1984). The individual data was summarised into matrices according to concepts and time, and a similar matrix was completed to summarise all participants' data. Frequency data was derived from these matrices. Further summarising tables, matrices and charts were completed which included the data for each concept (based on the frequencies) and the main patterns and themes over time.

Chapter seven is largely descriptive, using both the qualitative and quantitative data. It focuses on individual constructs among the participants, and examines the data at all five phases. The intention was to ascertain and describe the viability of the constructs within the entire coping process, to determine any common patterns for the group as a whole and to begin to explore any possible influences of the appraisal, coping strategies, reactions and outcome on the coping process.

For chapter eight the participants were divided into two groups depending on whether their subjective outcome was positive or negative. The intention was to make the data more manageable at a nomothetic level so that the finer details of the coping process over time could be examined. The differences between the groups were analysed quantitatively using descriptive statistics and the qualitative data was also subjected to further summary tables to ascertain any differences between the groups. Each construct was then analysed over all phases, and the coping process during each phase was analysed to begin to clarify the differences and similarities between the coping processes for the participants in the two groups.

In chapter nine four case studies are presented to ascertain more detail about the coping process. The data was mostly qualitative and was analysed from the summary matrices and the transcripts from the interviews. Chapter nine describes how individual participants coped with the surgery event over all phases.

The purpose of the present chapter is to examine the individual constructs at a descriptive level. and to ascertain any preliminary patterns at the nomothetic level.

COPING STRATEGIES

The participants were given eight possible strategies and were asked to indicate whether or not they used these, and if so were requested to comment on what they actually thought or did for each strategy. The frequency data showed that every participant used a different number of coping strategies at each phase and the usual pattern was for more strategies to be used during the presurgery phase ($\bar{x} = 6.0$) and the hospitalisation phase ($\bar{x} = 6.1$) and then to decrease over the recuperation ($\bar{x} = 5.3$) and recovery periods ($\bar{x} = 4.0$), and only two participants used strategies during the outcome phase ($\bar{x} = 0.5$). This suggests that number of coping strategies the participants used reduced as their need for coping with the surgery decreased. There were differences between the participants in the mean number of strategies used at each phase. The range was from 5.8 to 2.0, the median was 4.6 and the mode was 5.0.

There were differences between the women in the types of strategies used. No participant used the same pattern of strategies consistently as each woman varied the type of strategies she used at each phase. Most had only one or two strategies that they used at every phase, otherwise different strategies were used at different times.

There were different ways that the same strategy was used. For example, the way diverting attention was used varied: "keeping busy," "walking," "talked about children," "thought about my plants." Direct action was also described in various ways: "did exercises," "talked to others who had had the operation," "had a booklet." "got information about the surgery." Some strategies were generally used in a similar way. For example, acceptance and spiritual comfort were described as being used in the same way each time by all who used these, and catharsis was described by three participants as being used the same way each time.

The strategies of acceptance, social support and relaxation were used more than 80% of the total time, and the least used were situation redefinition and spiritual comfort which were used approximately 30% of the total time. All other strategies were used around 50% of the time. There were five occasions where strategies were used by all participants: acceptance at the presurgery and hospital phases, relaxation during the

hospitalisation and recuperation phases, and social support at the presurgery stage. Table 8 shows the most frequently used coping strategies for the first four phases. Acceptance and social support were used each time. relaxation was used during hospitalisation and recuperation. direct action and one other (as defined by each participant) were used during presurgery and hospitalisation. Catharsis and distraction were used only during the presurgery phase.

TABLE 8: *Coping strategies used by at least six of the participants for each of the first four phases*

PHASE			
PRESURGERY	HOSPITAL	RECUPERATION	RECOVERY
acceptance	acceptance	acceptance	acceptance
social support	social support	social support	social support
distraction	relaxation	relaxation	
direct action	direct action		
catharsis	other		
other			

The participants stated that most of the time they used more than one coping strategy at the same time. All agreed that the strategies were not used in isolation but were as one woman stated " all crunched up together". One participant described her interactive use of strategies during hospitalisation. "They are interactive. Information and support took me through surgery, I used spiritual comfort through out, plus support ran in conjunction with all the others." The participants varied as to which coping strategies they used together as no patterns were apparent either among the participants or for individuals, indicating the variability in the pattern of the use of strategies.

Summary

The results showed that the use of coping strategies varied. as no woman used a consistent pattern of strategies over time. and no two participants used the same pattern of strategies. The number of coping strategies used decreased over time and for most participants it was no longer necessary to use them by the outcome phase. This suggests that the role that the strategies played in the coping process decreased as the surgery progressed and the participants' recovery took place. There was evidence that the coping strategies were not used in isolation but that they were used simultaneously and interacted with each other.

The type of strategy used also varied and some coping strategies were used more frequently at the different phases. Acceptance and social support were the only strategies used at each phase and the data showed that some strategies were used frequently during one phase only. For example. the presurgery phase was the only time that catharsis and distraction were used frequently. An important link in the coping process is to determine whether the same strategies that were used most frequently were also those that were considered effective for dealing with the surgery event.

APPRAISAL

Participants were asked how they generally perceived the surgery event at each phase. There were differences between the participants in the general appraisal of the surgery event and typically the women viewed each phase either positively or negatively. For example. during the recovery phase some had a positive perception:

> "I feel fully recovered."

> "I'm living normally now."

Others had a more negative perception of their progress during recovery:

> " When you think about the trauma that's been instilled on the body you have to realise it takes time. Impatience is my biggest problem."

> "There's not much progress."

There were changes in this general perception over time. At the presurgery phase five of the participants viewed the pending surgery as positive and necessary. The perception remained much the same at the next phase except eight of the nine women perceived the event as necessary and/or positive in some way during the hospitalisation

period. There was a change in the general perception by the recuperation phase as all the women had a more negative appraisal of the event. They considered that progress was very slow. During the recovery phase some of the women now perceived themselves as fully recovered, and others still considered that progress was slow. At the final interview the women were asked to describe their retrospective view of the entire event. Five of the women perceived this as positive ("did the job that was necessary and it was well done." "great, it had to be done"), and four of the women viewed the entire event more negatively ("I wouldn't like to have it again, I was so helpless." "I'm wondering if it was a waste of time").

Stress appraisal

The participants rated their perception of stress on visual analogue scales at all five phases. It was assumed that the participants would find the experience of surgery stressful and all the women did rate and describe at least one time that was stressful, but there was considerable variability as the standard deviations and ranges in Table 9 show. The range remained wide at every phase, reached the extremes during hospitalisation and recovery, and then decreased at the outcome phase.

Table 9 also shows the mean rating at the presurgery phase was moderately low, this increased during hospitalisation, decreased at the recuperation phase, reached the highest point at the recovery phase, then dropped to very low during the outcome phase.

TABLE 9:   *Mean ratings, standard deviations and ranges for the perception of stress at each phase of the surgery event*

	PHASE				
	PRESURGERY	HOSPITAL	RECUPERATION	RECOVERY	OUTCOME
MEAN	36	41	24	44	9
S.D.	24	35	23	3	15
RANGE	1 - 80	5 - 98	1 - 70	1 - 98	1 - 48

The women were asked what they were finding stressful at each phase of the surgery event. The nature of the stress varied at each phase of the event. During the presurgery phase it was the anticipation of surgery which most of the women found stressful, and during hospitalisation the actual surgery created the perception of stress. During the recuperation phase it was the frustration of not being able to do things. At the recovery phase, which had the highest mean rating, the stressors were connected to the recovery period. By the outcome phase seven of the women did not find the surgery event stressful.

In summary, the participants had different perceptions of the amount of stress from phase to phase. They also reported changes in the specific stressors over time. Presumably the perception of stress during the surgery event has the potential to influence the coping process at each phase and the entire event.

Primary Appraisal

The participants were asked to rate the extent of their perceptions of threat, challenge, harm and loss on visual analogue scales and were asked to describe the nature of these appraisals. Table 10 shows the means, ranges and standard deviations for primary appraisal as measured by the visual analogue scales. There were large standard deviations and ranges which show how differently the participants perceived all these primary appraisals.

Threat

The participants reported that the level of threat was quite low during the presurgery phase. They had a higher rating of threat during the hospitalisation, recuperation and recovery phases, and by the outcome phase their perception was low again. The rating of the perception of threat overall was not that high, so it seems that the primary appraisal of threat was not generally a dominant factor in the coping process for the surgery event. However, the variability suggests that some did find that this was the case. For those who did find it threatening it was clear that the nature of the threat changed from phase to phase. During presurgery there was some limited concern about the future, during hospitalisation the threats were specifically concerned with the actual surgery, at the recuperation phase it was problems specifically related to recovery and by the recovery phase the threats could be interpreted as more 'normal' daily hassles not necessarily connected directly to surgery.

TABLE 10: *Mean ratings, standard deviations and ranges for primary appraisal as rated on the visual analogue scales*

Phase	THREAT			CHALLENGE			HARM			LOSS		
	mean	s.d.	range	mean	s.d.	range	mean	s.d.	range	mean	s.d.	range
PRESURGERY	12	27	1-85	37	42	0-97	-	-	-	-	-	-
HOSPITALISATION	26	32	2-83	58	29	15-94	36	42	0-95	13	18	0-46
RECUPERATION	28	33	0-80	41	43	0-95	16	21	0-45	16	26	0-65
RECOVERY	27	30	1-78	35	36	1-94	16	24	1-68	9	15	0-50
OUTCOME	10	22	1-69	51	34	2-94	9	11	1-36	7	9	1-27

Challenge

The rating of challenge appraisal also altered at each phase and at all times was higher than the perception of threat. The perception of challenge and the nature of the challenge altered as the event unfolded. Initially there was little challenge overall and for some participants it was to get through the surgery event. The focus during hospitalisation was on recovering physically and beginning to return to normal functioning. During the recuperation and recovery phases the participants reported that the challenge was in the progress during recovery and at the outcome phase they stated that looking forward was main challenge.

There were two peaks on the rating of challenge: at the hospitalisation phase and the outcome phase. It was assumed that the hospitalisation stage would have been more threatening than challenging but this was not the case. The women were able to maintain a positive appraisal at the time of the actual surgery, and this was a different perception of challenge to that at the outcome phase when most had recovered completely and were wanting to get on with their lives. This suggests that a perception of challenge can exist whether the potential is for harm or for gain. These results also show that the nature of challenge was very different at these two phases and show how the change occurred in the appraisal despite a similar rating.

Harm and Loss

The participants generally perceived harm and loss at a low level although there were some differences as the ranges and standard deviations in Table 10 show. In spite of major surgery being a trauma to the physical body the women did not perceive it as that harmful and that may be partly due to their generally very positive appraisal overall. However, they did perceive the most harm during the hospitalisation phase which would be expected as this was the time of the actual surgery. The women's accounts showed that only four of them found the experience at the time of the surgery harmful:

> "Heaps. My body was not meant to be cut about. Hopefully it's just temporary."

> "Quite harmful. It was like back to being a baby, have to depend on everyone."

Loss was even less of an issue in spite of all the literature surrounding women having to come to terms with the loss of their female organs. On the contrary five of the women stated that they were surprised that they did not perceive more loss, or that because their

female organs were diseased in some way it did not matter, their health was more important.

> "This surprised me. I thought I would feel a sense of loss because I didn't want to lose my womb but I haven't thought about it. I used to think that I would rather have the period pain."

> "Strangely enough the loss of my female organs has not concerned me, but I think that's mostly because I have been contemplating this for years, arriving at the decision. I think my quality of life will be improved if anything, not a deterioration, and the support and kindness I have received from the many men I know has only demonstrated that they do not find me any less feminine which is great!"

Three of the women described some sense of loss at times and this was identified in different ways: as loss of quality of life, a loss of the usual thought processes, a loss of social functioning, and "a vague sense of emotional loss."

It seems that the appraisals of harm and loss were not dominant in the surgery process. When the participants described the nature of harm and loss there were fewer differences than there were in the nature of threat and challenge.

Summary

The specific primary appraisals did not appear to be important influencing factors in the surgery process and so it may be that they did not have a major influence on the process of coping. Challenge was the appraisal that was reported the most frequently and this was rated higher than threat, harm or loss throughout. The rating and the nature of threat and challenge altered at each phase while harm and loss were more consistent. However, participants were able to distinguish between the appraisals and their descriptions showed that these appraisals can occur simultaneously.

The comments surrounding a more general appraisal showed that this may be more influential in the coping process. The participants appeared to report either positive or negative overall perceptions of the surgery event. It could be argued that a positive perception equates to the theoretical notion of challenge, and the negative perception corresponds to an appraisal of threat, but the general appraisal appeared to be more encompassing than the specific concept of primary appraisal suggests. It also appeared to have had more impact on the coping process than the specific primary appraisals. It is possible that the general appraisal was the combination of several more specific appraisals such as stress, primary appraisal and control which all contributed to an

overall positive or negative perception. As the overall perception appeared to be influential in the coping process this is now introduced as an additional concept and refers to a general appraisal which can be either positive or negative.

Secondary Appraisal

Information on secondary appraisal was gathered on four different aspects of repertoire. history. constraints and awareness. to ascertain the processes involved in the choice of coping strategies.

Repertoire

Participants were asked whether they considered that they had a wide range of coping strategies to choose from that they could use to deal with their surgery. If the response was 'yes' they were asked why they made the choice that they did. If the response was 'no' (meaning they reported a narrow repertoire) they were asked what limited their choice.

One participant described a narrow repertoire throughout the process. and two identified a wide repertoire throughout. The remainder stated that the repertoire altered as the surgery event unfolded. The woman who identified an entirely narrow repertoire did not appear to want to become too aware of her coping behaviour and lacked internal resources.

> "I would rather try to shut down. I don't want to think about it so I didn't think about any other strategies........I'm not one to go into that sort of thing, I'm more matter of factual.............it was probably because I am not very good at analysing things."

In contrast the participants who described a wide repertoire across time considered that they had internal and external resources which allowed the availability.

> "It's my make-up, I'm a workaholic. I've always had to talk over and over. Listening and talking have been excellent, it fills me with confidence.......these are a natural response but I also took the nurses advice...........they were suggested."

> "They were readily available, on tap as they are things I am used to doing.....they are part of my life. Relaxing and sleeping are common sense if I want to get back to full health............ they were available because I have used them before with success."

The frequency data showed that the participants indicated a narrow repertoire 44% of the time. The main reason given for this was that nothing else was needed at that particular time. The main reason given for a wide repertoire was that these were the best ones to use as they were available.

History

A history of past experience was ascertained in two ways. First, by asking the participants whether or not they had had previous surgery. All participants had had previous surgery involving general anaesthetic, and all but one had had surgery more than once. So none of the women were dealing with a totally new experience. It may be that this had an impact on the level of perceived stress and threat particularly as all would have known the surgical procedure and recovery process. They may have repeated their previous coping behaviour, believing it to have been effective in the past.

The second way history was ascertained was by determining whether similar coping strategies had been used in the past. Some women stated that the coping strategies that they used were the ones that they always used or had used in previous situations.

"They were all others I would use in any situation."

"I rely on these for most upheavals."

It is also probable that the women had used similar coping methods in dealing with their previous surgery and presumably if they found these effective then they would use them again.

The women were also asked how they learned the strategies they used. The main reason given was that it was due to life experience and they had been learned along the way.

"A life long learning process. We put ourselves in situations that challenge and broaden us. I have also developed methods of coping for business."

"I learned them when I was a baby in the cradle, through my upbringing, particularly my grandmother's influence. They are a way of life now."

It seemed that this applied to the general strategies and those that the women had used before in other situations. Another reason given for where the strategies were learned was from specific teaching and these were strategies that were generally specific to the surgery situation.

"Deep breathing was advocated by the nursing staff."

"I learned these at the hospital and through tuition from stress management"

Constraints

The participants were asked if there was anything else they would have liked to have used but for some reason found that this was not possible. Five of the participants indicated that there were constraints to their choice of coping strategies. These fell into two categories, the first being situational constraints involving a perceived lack of resources which prevented use of the strategies they would have preferred. An additional constraint within this category was the fact that their physical and medical condition prevented them from achieving some activities which they would normally have been able to do.

"I would liked to have found information on the drugs. If I know the side effects then I know that's it, but this (information) is not available."

"I wanted to talk to others that have had the same thing done but I don't know how to go about it, I don't know anyone."

"I wanted someone to take me out for a drive but no-one was available."

The second category was personal constraints where the women held a belief about themselves or had a fear of the consequences.

"I wanted to gather more information but I didn't want to delve into it so I didn't press it as I thought it best to leave it alone."

"I wanted to tell my boss from the start what it was about. I had a lack of courage to tell her."

"I wanted to ring the doctor. I feel that I've had the surgery so I should be recovered by now. But he might think I'm a pain."

It is possible that the reported presence of constraints had an impact on the ability of the participants to cope effectively with the particular phase of the surgery in which the constraints occurred. The entire process of coping for the surgery event may have been affected for those who reported several constraints.

Awareness

The women were asked which strategies they used automatically and which ones they thought about before they used them. The participants were able to identify which choice they had made in approximately half of the total responses. From this data the majority of the coping strategies were chosen and/or used automatically. This tended to be because they were familiar strategies.

"They were all others that I would use in any situation."

"I'm using ones that I have used before."

The 25% of strategies that were thought about tended to be more practical or where the women had an awareness that they had been learned. Sometimes the consciously chosen strategies were identified as being new ones to the participants.

It seems that it is more common for participants to use strategies without thinking about them because they are familiar and it may be that these were the strategies that the women had found effective in the past.

Summary

The data showed that the secondary appraisal process appeared to be influential in the coping process. For example, it is likely that the knowledge and experience gained from having had previous surgery reduced the stress appraisals and influenced the choice of the strategies.

It appears that the strategies used were acquired from life experience and the participants tended to use the same coping strategies that they had used previously. The strategies were also acquired from learning new ones to deal specifically with the surgery. These new strategies would probably become incorporated into a person's repertoire. There were differences among the participants in their perception of their available repertoire.

Constraints were reported by more than half of the participants at least once, and these were perceived as either a lack of resources or personal constraints. Participants had some difficulty ascertaining whether the strategies were chosen consciously or automatically as they were able to describe this selection process only approximately half of the time. However, the data provided does indicate that both methods of choosing strategies were used.

Tertiary Appraisal

Participants were asked which strategies they found effective and/or ineffective and were requested to rate this overall perception on visual analogue scales. Only two participants described themselves as still needing to cope with their surgery by the outcome phase so the following data focuses mainly on the presurgery phase through to the recovery phase.

Perceived effectiveness

All participants described effective strategies at all phases of the coping process. The participants also commented that most of the time the combination of strategies was more effective than just one strategy. The participants rated the perceived effectiveness of coping strategies at a consistently high level over time. Table 11 shows the means, standard deviations and ranges for the visual analogue scales. The participants reported the highest level of perceived effectiveness during the presurgery phase and the lowest during the recovery phase, which also had the largest standard deviation. The level remained consistent from presurgery to recuperation, with a decrease at the recovery time and a slight increase at the outcome phase. The standard deviations showed there was little difference among the participants, especially in comparison to the other constructs rated on the visual analogue scales. The exception was at the recovery phase when there was a considerably larger standard deviation. The ranges were also smaller than for the other constructs.

TABLE 11:   Mean ratings, standard deviations and ranges for the perception of tertiary appraisal at each phase

	PHASE				
	PRESURGERY	HOSPITAL	RECUPERATION	RECOVERY	OUTCOME
MEAN	88	83	85	71	78
S.D.	6.4	8.1	6.9	22	10.6
RANGE	80 - 99	74 - 95	75 - 95	54 - 98	66 - 85

The women were requested to identify the most effective coping strategy for each phase. It was clear that overall the strategy considered to be the most effective was social support. It was identified as being the most effective only in the presurgery, hospitalisation and recuperation phases, suggesting that by the later recovery stages the need to call on others had diminished, and therefore this strategy no longer needed to be considered the most effective. Six of the women made general comments to the effect that they considered social support to be the most effective overall, particularly when they were asked at the outcome phase to identify what contributed the most to their coping ability. In the present study social support also included support from professionals and this was important for several of the women.

> "To me the most comforting aspect was the total support and help from my surgeon and his nurse. No matter how small the problem they saw to it and made sure I reported in daily on progress. It gives you a lot of confidence and makes problems so much easier to cope with."

> "What contributed the most? trust in the staff, a lot was what went on in theatre, the anaesthetist did a good job. During recovery my daughter and mother were here, and knowing someone was here took the pressure off."

> "The main contribution was the help and support from everybody."

> "I coped pretty good most of the time. A lot of it had to do with support as at the time of my depression support was lacking."

Social support was also one of the strategies identified as the most frequently used, so clearly there was a connection between the most frequently used strategy and the strategy perceived as the most effective. It may be that the surgery event created a need for support from others as the participants were unable to continue with their daily life independently for a time. So it may have been the nature of the event which contributed to social support being perceived as effective rather than the other most frequently used strategies of acceptance and relaxation.

Participants were also asked how they knew the strategies had been effective and the reasons that the women described fell into three categories. Fifty percent of the time it was because the women felt better physically and/or emotionally:

> "I continued to feel better and fitter every day."

"I am steadily feeling better physically and emotionally and mentally so
the results are showing their effectiveness."

"Because I'm feeling good, feeling level headed, not down to it, I'm
coping."

The second category was where the participants described some sense of
achievement in a practical sense and this occurred 25% of the time.

"I just about achieved my aims. They would have been totally effective
if the weather hadn't held up progress."

"I got the information I wanted."

The final category was specifically related to achieving some form of relaxation and/or
pain relief:

"Because I was relaxed and everything was going according to plan."

"When the spasms of pain were very bad deep breathing seemed to give
me some control. Staying still seemed to lessen the bouts of pain."

It seems as though the reasons for judging a coping strategy effective vary and are
mostly influenced by the particular situation or phase of the event that is being dealt
with at the time.

Perceived ineffectiveness

Five of the women identified using strategies that were ineffective and they stated that
these were used 25% of the time. Two of the women used ineffective strategies during
three phases and each time these strategies were different. There was no strategy that
was consistently reported as ineffective. For all the strategies that were described as
ineffective the reason given was that these did not help to change anything.

Presumably the perception of ineffective strategies would have had an influence on the
coping process for the particular phase and for that individual, and may also have
influenced the overall coping ability and possibly the outcome.

Summary

The ratings of perceived effectiveness were consistently high over time and there was
little variability among the women compared to the ratings of other appraisals. This
suggests that despite considerable variability in other appraisals of the coping process

all women subjectively considered that their coping strategies had been effective as they wanted to believe they were coping in the best way they knew. All participants perceived most coping strategies as effective at all stages of the process. Five of the women identified at least one ineffective strategy. There was only one reason given for strategies being perceived as ineffective but several reasons for effectiveness. It is possible that the participants were more aware of themselves and their situation in determining the positive effects and were also aware that the ineffective strategies had not had any influence on their coping attempts. This suggests that the women who used perceived ineffective strategies identified the importance of the strategies to effect change of some sort to deal with the situation.

Social support was the coping strategy most often perceived as the most effective, and was also one of three strategies identified as being used most frequently. It could be that social support itself is an important coping strategy in the surgery event, which is likely since the nature of surgery decreases a person's ability to be independent. It is also possible that it is the fact that it was the same strategy that was the most frequently used and was perceived as the most effective that contributed to consistent tertiary appraisal.

Control

Participants were asked to rate their perception of control over the situation at each phase and to indicate the nature of the control. Table 12 shows the means, standard deviations and ranges for the perception of control on the visual analogue scales. The participants considered their perception of control to be lower for the first two phases then they had a higher perception at the recuperation and recovery times, and the highest mean rating was at the outcome phase. The large standard deviations and wide ranges show the variability in the ratings particularly for the first two phases, and these decreased over the last two phases.

The women's accounts showed that the sense of control fell into two categories: external control and the perception of self-control. During the hospitalisation phase when the women perceived a form of external control they also rated the perception of control low and considered that others had control:

> "Relying fairly well on doctor's and nurses while in there."

> "Not very much, in the hands of everybody else."

During the same phase, when the participants had a perception of self-control they rated the visual analogue scales higher and were able to identify the situation as being in their control even if others were involved:

"Fair bit of control. I would normally ask for something and if I was in pain I would say. They were taking notice of what I was saying."

"I had full control. you were asked if you were in pain. I was always in control as staff gave me a choice."

It seems as though the same situation evoked a different cognitive appraisal of the sense of control and the women who were able to perceive self-control were also able to interpret the involvement of others as beneficial. whereas those who perceived external control viewed others as having taken control.

TABLE 12:   *Mean ratings, standard deviations and ranges for the perception of control at each phase*

| | PHASE | | | | |
	PRESURGERY	HOSPITAL	RECUPERATION	RECOVERY	OUTCOME
MEAN	43	44	73	69	80
S.D.	41	38	26	26	25
RANGE	2 - 100	4 - 98	15 - 96	34 - 96	18 - 96

None of the participants had a consistent sense of self-control throughout as all had at least one time when they considered that the situation was not in their control. Two of the women did not achieve a sense of self-control until the outcome phase, and eight of the women considered they had self-control by this final phase.

Summary

It seems that a factor in the control appraisal is whether or not there is a sense of self-control. When the ratings on the visual analogue scales were higher the participants described a sense of self-control, and when the ratings were lower the women felt as though external factors were the controlling force.

REACTIONS

The women were asked to rate specific emotions. cognitions and physical reactions on a five-point scale. and were also asked an open-ended question about their emotional. cognitive and physical changes at each phase. There were differences between participants as to what reactions were noted and the reported awareness of reactions. Participants tended to be more able or willing to describe their specific emotional reactions than the physical or cognitive reactions. All the women reported at least some emotional reactions in response to the open-ended question and most identified emotions at each phase. Eight of the women described physical reactions but this was usually only for one or two of the phases. Seven of the participants reported cognitive reactions and this was only for two or three of the phases. Table 13 shows the mean responses and standard deviations at each phase for the ratings of positive and negative emotions, and cognitive and physical reactions.

TABLE 13:   *Means and standard deviations and ranges for the positive and negative emotions and cognitive and physical reactions over time*

	REACTIONS							
PHASE	POSITIVE		NEGATIVE		COGNITIVE		PHYSICAL	
	mean	s.d.	mean	s.d.	mean	s.d.	mean	s.d.
PRESURGERY	59.0	20.7	31.4	9.3	31.6	13.9	30.8	15.8
HOSPITALISATION	67.6	11.7	33.2	10.7	40.5	11.8	62.2	22.0
RECUPERATION	69.1	18.8	32.8	12.6	38.8	19.9	51.0	21.79
RECOVERY	59.4	22.1	37.4	16.6	33.8	15.9	42.1	17.9
OUTCOME	76.8	20.2	25.8	8.4	29.75	20.8	32.25	15.9

Positive emotions

Table 13 shows the highest responses throughout were for the positive emotions and the women reported these as highest at the outcome phase. The lowest ratings were at the

presurgery and recovery phases and the ratings were higher during hospitalisation and recuperation. The standard deviations for the positive emotions ranged between 11.7 and 22.1. The means for the separate positive emotions showed that the women rated four of the emotions the highest. Confidence was highest at the presurgery and outcome phases. hope remained relatively high throughout and peaked at the outcome phase. relief was highest at the hospitalisation phase. and feeling pleased was highest at the hospitalisation and outcome periods. The means showed that the specific positive emotions altered from phase to phase and there were differences between emotions.

The participants rarely described positive emotions in response to the open-ended questions and when they did they tended to be connected to a sense of relief that the surgery was over:

> "Thank God it's over."

> "Pleased it's over. one is definitely more emotional."

> "Overwhelming sense of thank God it's over - a relief."

> "A relief that it all went so smoothly and feeling pleased that my body coped so well."

Negative emotions

Table 13 indicates that the negative emotions showed less variability in that the standard deviations ranged between 8.4 and 16.6. The participants rated these emotions lower overall and there was a consistent level for the first three phases, then there was a decrease at the outcome phase. The highest rating was during the recovery phase which also had the highest standard deviation. The means for the separate negative emotions showed that four of the emotions were rated the highest. Fear and apprehension were rated highest at the presurgery and hospitalisation phases, and frustration at the recuperation and recovery times. Anxiety steadily increased from presurgery to recovery then decreased at the outcome phase.

The descriptions of negative emotions from the responses to the open-ended questions were more frequent and more varied then those for the positive emotions. There were four main emotions that were reported. The most frequent reports were for some feeling of upset:

> "I'm getting upset that the recovery is so slow."

"I'm more upset by the fact that I couldn't do anything. I like to be independent."

"I shed a few tears."

A description of frustration and impatience was also frequently reported:

"Tearful and frustrated with myself this week."

"Frustration and impatience to get on with life."

Anger,

"I had an argument with a nurse."

"I developed a temper tantrum."

and anxiety

"I was anxious the night before."

"I was anxious when I first went in."

were reported occasionally.

Cognitive reactions

Table 13 shows that the women rated their cognitive reactions at a similar level throughout reaching the highest point during hospitalisation with the smallest standard deviation, and the lowest rating at the outcome phase with the largest standard deviation. For the specific cognitive reactions concentration had the highest mean rating and peaked at hospitalisation and recuperation. Confused thoughts were rated high during hospitalisation and rumination was high during presurgery.

More descriptions of cognitive reactions were reported in replies to the open-ended questions during the first two phases and these tended to be different for each response:

"As it gets closer I am thinking more about the details of the surgery."

"Am I going to be a full woman? What will my husband think?"

"I talk myself out of things a lot."

"It was definitely hard to think. If I had had to do maths I would have been in trouble."

"I'm not interested in things. I'm blocking off."

Physical reactions

Table 13 shows that the women rated the physical responses highest during the hospitalisation period then there was a gradual decrease over the recuperation to outcome phases to reach a low level similar to that of the presurgery phase. For the specific reactions the women rated lacking energy the highest and these were rated highly from the hospital phase through to the recovery phase. Pain followed a similar pattern with the highest ratings also at the same phases.

Some of the physical reactions that were reported, such as discomfort, pain or temperature, were connected more to the physical condition rather than a physical reaction to stress and there were actually few reports which could be considered a stress reaction. It is probable that as the surgery event was ongoing it was more difficult for the participants to identify physical stress reactions as there might not have been as many occurrences as there was with short term stress created by discrete events.

The most frequently reported physical reaction was sweating during the hospitalisation phase, for example, "I was sweaty and overcome, probably with fear." Other descriptions included: "my stomach goes kerplop;" "I have butterflies in my stomach;" "my heart has been racing and thumping."

Summary

The results showed that the women rated the emotions and the cognitions reasonably consistently over time. There was an increase in the physical stress reactions during hospitalisation which would be expected given that this was the time of the actual surgery. The standard deviations showed there was variability in the responses. The ratings of the specific reactions altered at each phase and the reactions which were identified as the highest also altered from phase to phase.

The descriptions from the women showed that they reported negative emotions far more frequently than positive emotions, yet they were able to rate specific positive emotions. The positive emotions were rated more highly throughout and these corresponded to a higher perception of challenge and effectiveness. The women appeared to be more aware of their negative emotions and these may have been the same participants who perceived the event generally more negatively. It is possible that the emotional

reactions were an influencing factor in the coping process. Physical stress reactions were rarely reported and the reports of cognitions varied considerably so the impact of these reactions on the coping process may be minimal.

OUTCOME

All the participants were informed by the gynaecologist at their post-operative examination that their surgery had been successful. One participant was still on medication at this time. The subjective outcome was measured by social functioning, morale and physical health at three phases: at the presurgery phase to get a baseline measure; during hospitalisation to ascertain whether or not the actual surgery changed the outcome measures; and at the outcome phase to determine whether the women considered they had returned to the baseline level.

Social Functioning

During the presurgery phase eight of the women stated that their social functioning was not affected at all. This changed during hospitalisation when five of the women considered that their social functioning had been affected considerably:

> "It does change, I couldn't go out and party."

> "It was affected, it was just non-existent, but who cares, this is far more important."

> "Quite markedly. 100% totally different."

At the same phase three of the participants maintained that their social functioning had actually improved:

> "It was probably more enhanced as it gave more time to think about others."

> "I was more sociable in hospital than out."

By the outcome phase four participants stated that their social functioning was at least the same as it had been prior to the surgery, ("about the same," "no different to prior to surgery"), two stated it was better than prior to surgery, ("considerably better," "good"), and two maintained that it was not back to where it had been prior to surgery ("still a little limited," "not back to one hundred percent yet").

Morale

Morale did not alter as much from phase to phase. Eight women stated that it was good during presurgery and five of these stated it was still good at the hospitalisation period. Three women found that it was not good at this same phase ("grotty," "certainly far from well"), and one participant stated that her morale had been affected by a bad experience but that otherwise she was "perfectly happy to be there, they treated me so well."

At the outcome phase six of the women stated that their morale had returned to the level it had been at presurgery and three participants stated that they were "still not one hundred percent."

Physical Health

At the presurgery phase five of the women maintained that their physical health was not good, for example "not behaving itself," "a bit nauseated," and four of the women stated that their health was good. During hospitalisation three participants stated that they were not well and six maintained that they were well apart from the expected post-operative problems. By the outcome phase five of the women stated that their physical health had improved, for example, "a bit better", "great, no doubt about the improvement." Two stated that it was good and two stated that it was not so good, for example, "Still a wee way to go, I was terrified to have sex, really nervous, scared it was going to hurt," "Slightly improved but not as good as I had hoped, but did I expect too much?"

Summary

The participants' comments showed that these three measures of the subjective outcome altered for most of the women as the surgery event unfolded. It was evident that not all of the participants considered that they were fully recovered after their medical post-operative examinations and it is possible that this outcome was influenced by the coping process for those women.

A closer look at the outcome data revealed that the women fell into two groups: the five who considered that they had positive subjective outcome as all three of the outcome measures (social functioning, morale and physical health) had been improved upon or returned to the level prior to surgery. The other four participants perceived their outcome more negatively. Three had two of the outcome measures which they did not

consider had returned to the previous level of functioning. and one participant had one measure which was "not back to normal."

TRENDS DURING EACH PHASE

The data was examined at a descriptive level within each phase of the surgery event by searching for patterns which identified how the participants were coping with the surgery event as a group. There was also an attempt to ascertain the possibility of interaction between the appraisals, coping strategies, reactions and outcome for the whole group. The preceding descriptive results showed that there was considerable variability in the data for the individual constructs and there was also variability in the data at each phase. There were few common patterns for the whole group, and it became clear that at each phase many of the constructs had dichotomous trends and there were possible patterns within these trends. It was decided that there needed to be a way of making the data more manageable at the nomothetic level and to be able to conduct a finer-grained analysis to examine the coping process. As the outcome data showed that five of the participants considered that they were recovered fully by the outcome phase, and four of the women stated that they were not recovered completely at this time, it seemed appropriate to divide the participants into these two groups. Chapter eight examines the differences between these groups and ascertains whether or not any differences in the coping process between the groups influenced the outcome.

CONCLUSIONS

Two main general conclusions can be drawn from these descriptive results. First, there were changes in the specific constructs over the phases. The appraisals that were measured by visual analogue scales revealed fluctuations in the ratings, showing that the participants perceived the surgery experience differently at each phase. The ratings of the reactions also changed from phase to phase and the specific emotions that were rated higher or lower also altered over time. The frequency data for the coping strategies showed that the participants used a different number and type at each phase. The qualitative data also confirmed that the specific nature of most of the constructs altered from phase to phase and the women described changes that suggested they were aware of the need to alter their coping behaviour according to the phase of the surgery event and perhaps according to their perceived ability to have managed the situation in the preceding stages. The only reported consistency over time was the rating of perceived effectiveness which remained high at all phases for every participant, suggesting that all women believed they were coping well with the surgery event. The qualitative data showed that the strategy perceived as the most effective altered from phase to phase, so although the overall perception of tertiary appraisal was relatively

consistent, the specific strategies that were perceived as most effective changed over time.

The second general conclusion is that the experiences that the participants reported were more variable than consistent. This was evident in the descriptive statistics and the differing accounts from the women. The qualitative data generally confirmed the variability as it showed that the nature of appraisal, the type of coping strategies and the specific reactions altered over time and differed among the participants. The variability suggests that there may be differences in the coping process and these may be different for each individual, or there may be similarities in the coping process for those with a different outcome.

However, the participants also reported some consistent experiences in the coping process and two general hypothetical patterns emerged from these experiences, suggesting how these constructs may combine to influence the coping process. One pattern included the constructs that appeared to influence the consistent tertiary appraisal, and in the other, the remaining constructs appeared to influence the different outcomes. Figure 10 shows the first pattern diagrammatically. All diagrams in the surgery study were constructed from the frequency data reported and represent aspects of the coping process which were occurring most frequently and therefore presumed to be having an influence on the coping process. The first pattern had a basis in the secondary appraisal factor of history where all participants had had previous surgery and so were familiar with the surgery event. They may have used a coping process similar to the one they used previously. This prior experience presumably lessened the impact on the perceived level of stress throughout which, although it was variable, was rated relatively low. This relatively low perception of stress influenced the fact that primary appraisal was not dominant as there was little perception of threat, harm or loss overall. However, the participants rated challenge more highly and this was more evident during two of the phases. These minimal appraisals may have influenced the consistent tertiary appraisal The evaluation of perceived effectiveness was preceded by the use of coping strategies which were viewed as interactive rather than isolative, and the number of which decreased as the surgery event unfolded. The fact that social support was one of the most frequently used coping strategies and was also perceived as the most effective overall may have also contributed to the consistent tertiary appraisal.

In the second pattern the participants' experiences flowed dichotomously and appeared to influence the different outcomes as shown in Figure11. The basis seems to be the positive and negative general appraisals that appeared throughout and these may have influenced the positive and negative reactions, the perception of self control or external control, and the dichotomy within secondary appraisal: whether the repertoire was wide
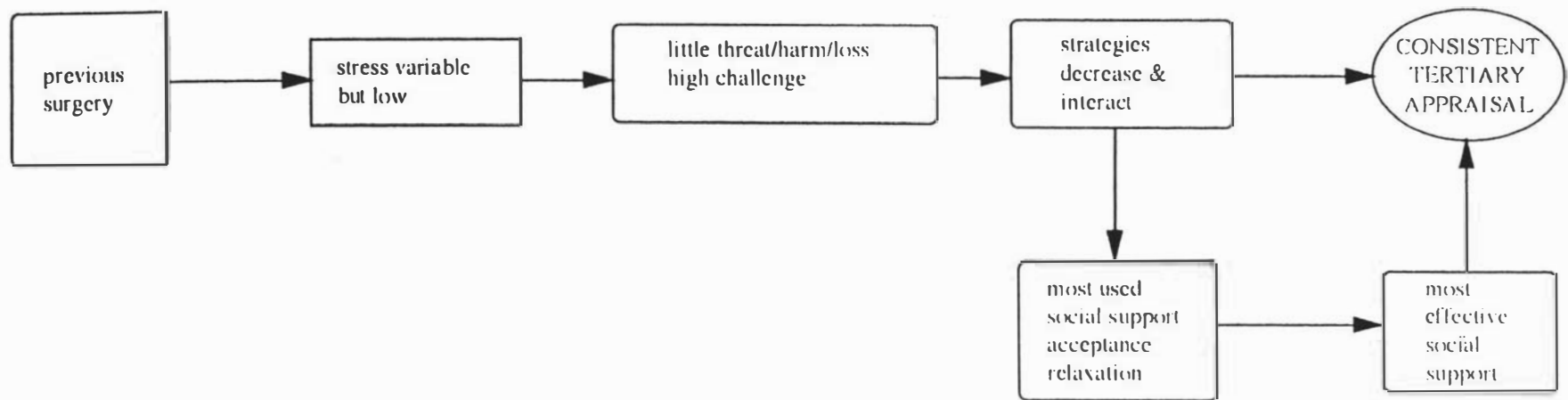
FIGURE 10: General pattern showing the constructs which contributed to a consistent tertiary appraisal
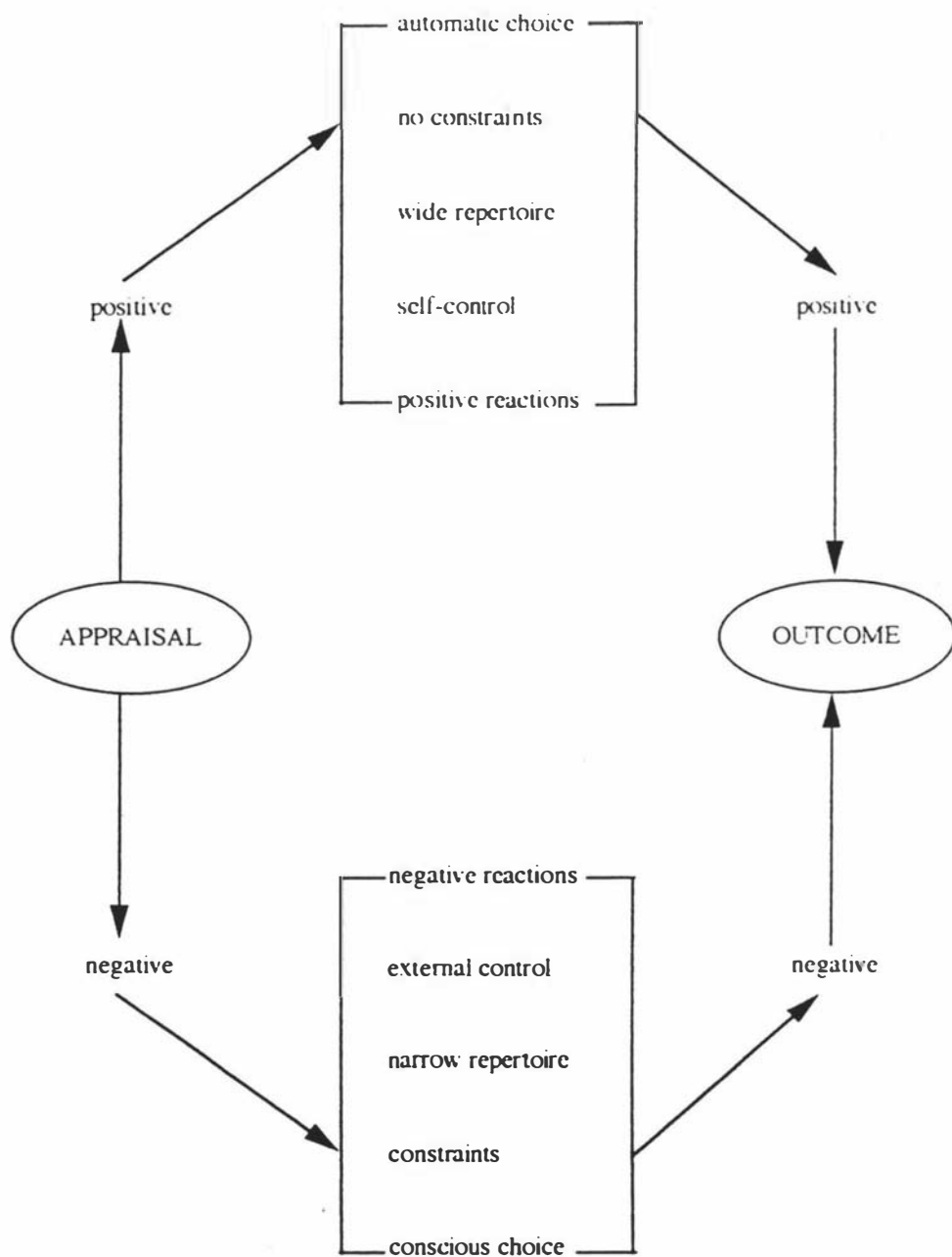
FIGURE 11: General pattern showing the constructs that contributed to different outcomes

or narrow, whether or not there were constraints, and whether coping strategies were chosen automatically or thought about first. These then influenced whether or not there was a positive or negative outcome. Presumably a positive general appraisal contributed to positive emotional reactions. perceived self-control. no constraints. a wide repertoire. automatic choice of familiar strategies and finally to a positive outcome. A negative general appraisal influenced negative emotional reactions. external control. constraints. a narrow repertoire. conscious choice of coping strategies and finally a negative outcome. It is important to examine the data in finer detail to determine whether these general patterns remained or were replaced with more detailed and varied patterns. and to ascertain the reasons for the dichotomies within the constructs.

The purpose of the present chapter was to examine the individual constructs at a descriptive level and to ascertain preliminary patterns at the nomothetic level. One of the limitations of this descriptive approach is that it was difficult to establish how the participants' experiences of coping evolved over time. The obvious dichotomous trends and the variability of the data made it difficult to establish more definite patterns of the coping process. However, the descriptive account established a basis for further exploration and allowed the data analysis to progress to a finer-grained nomothetic analysis.

CHAPTER EIGHT:

TWO GROUPS WITH DIFFERENT OUTCOMES

The participants were divided into two groups using the subjective outcome data at the outcome phase. Group P consisted of the five participants who considered that they were fully recovered by the outcome phase and therefore had a positive subjective outcome. Group N consisted of the four women who stated that they had not recovered completely by the outcome phase and so perceived their outcome more negatively. In the present study the outcome phase indicated the end of the surgery event as a medical clearance had been given, and so it also presumably indicated the end of the coping process as it suggested that the surgery event itself was no longer creating a need for coping behaviour. As the women in Group N still had some need for coping at the outcome phase it is likely that the coping process for this group was different to that of the participants in Group P.

In the present chapter the data for the participants in the two groups is compared for the individual constructs at all phases, then how the coping process was experienced for the women in the two groups is compared during each phase, and then the entire process for each group is examined. The purpose is to ascertain whether there is a difference in the coping process between those who perceived the outcome as positive and those who perceived it more negatively.

TRENDS FOR INDIVIDUAL CONSTRUCTS OVER TIME

The current section examines the differences between the groups for each construct using descriptive statistics and examples of the women's accounts. It begins to explore any differences in the coping process and how the women experienced coping with the surgery event at all phases.

Coping strategies

The participants in Group N used a slightly higher number of coping strategies ($\bar{x} = 4.7$) than those in Group P ($\bar{x} = 4.1$) overall.

Table 14 shows there were different patterns between the groups in the mean number of coping strategies used at each phase. The women in Group P used the highest number at the presurgery stage and used fewer strategies at the hospitalisation and recuperation phases. They used half this number during the recovery phase, and no longer needed to use coping strategies by the outcome phase. In contrast, the women in Group N used a fluctuating number of strategies from phase to phase. They used fewer strategies at the

TABLE 14: *Mean number and type of coping strategy for the first four phases for Group P and Group N*

	PHASE			
	PRESURGERY	HOSPITALISATION	RECUPERATION	RECOVERY
GROUP P	$\bar{x} = 6.8$ acceptance social support relaxation distraction catharsis other	$\bar{x} = 5.8$ acceptance social support relaxation direct action	$\bar{x} = 5.6$ acceptance social support relaxation distraction	$\bar{x} = 2.8$ acceptance social support relaxation distraction other
GROUP N	$\bar{x} = 5.75$ acceptance social support distraction direct action	$\bar{x} = 6.5$ acceptance social support relaxation catharsis other	$\bar{x} = 5.0$ acceptance social support relaxation	$\bar{x} = 6.0$ acceptance social support relaxation catharsis distraction

presurgery phase than those in Group P, then they used the highest number during hospitalisation, even fewer during recuperation. They used an increased number at recovery, then these decreased to the lowest number at the outcome phase.

This suggests that the number of coping strategies most frequently used may have an influence on the outcome. Those in Group P reported using more strategies during presurgery and this may have combined with the more positive appraisal to provide a better basis for the subsequent phases, and for the need for coping strategies to decrease gradually. The fluctuations for those in Group N may have been attempts to manage the negative situation and suggests that their need for coping was greater throughout the surgery event.

Table 14 also shows the patterns of coping strategies used by the women in the two groups for the first four phases. This data represents the coping strategies that were used by at least four out of the five women in Group P and three of the four women in Group N. Acceptance and social support were used by the participants in both groups at each of the first four phases. Relaxation was used by those in Group P at each phase, and in all but the presurgery phase by those in Group N. There were differences of at least one strategy at most phases, but generally the pattern of coping strategies used by the women in both groups was similar.

Appraisal

The women's comments concerning the general appraisal of the surgery event showed there were differences between the groups during the presurgery, recovery and outcome phases. For example, during the presurgery phase those in Group P had a positive perception over this anticipation time:

> "I will get better as quickly as possible so that I can recover quickly."

> "I look forward to getting it over and done with."

Those in Group N had a more negative or indifferent perception of their pending surgery:

> "It's unfair, it's all been brought on by what happened before. I liken it to horror."

> "It's a means to an end. I'm not particularly looking forward to afterwards but I forget about it."

There was little difference between the groups during hospitalisation as most of the participants viewed this phase as necessary and/or positive. There was also little difference between the groups during the recuperation phase, as all the women had a negative perception. It is possible that the difference in the general appraisal at the presurgery stage was influential in determining the remainder of the coping process. If the women had a certain expectation of the entire event during this anticipatory phase this may have had an impact on the other appraisals, the use of coping strategies and the reactions at this phase. That impact may have been sufficient for there to be relatively constant negative or positive effects throughout.

<u>Stress</u>

Figure 12 shows the mean ratings on the visual analogue scales for stress, threat, challenge, harm, loss, effectiveness and control. The graph shows that those in Group N had a higher rating of stress appraisal throughout than the participants in Group P. However, the women in both groups had a similar pattern for the appraisal of stress over time, except during hospitalisation when those in Group N had an increase in their perception of stress, while the stress appraisal for those in Group P remained at the same level as the presurgery phase. The participants in both groups found the recuperation phase less stressful, the recovery phase more stressful, and by the outcome phase their perception had dropped to below the initial level.

The nature of the women's comments concerning their perception of stress differed between the groups. Those in Group P generally described their stressors in a more positive and accepting way:

> "My body is trying to get back to normal. It's not really a stress, just part of the recovery process."

> "I'm not able to do the little things one would like to do."

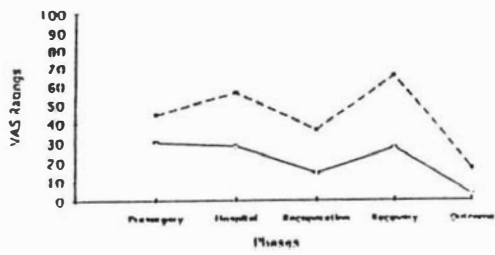> "I had some natural anxiety prior to surgery."

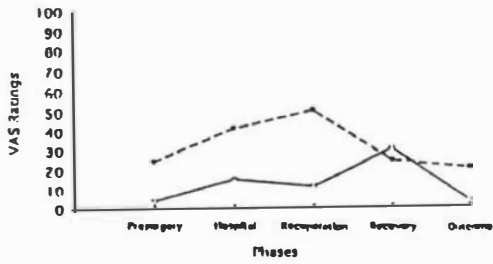The women in Group N gave a more negative and overwhelming report of their stressors:

> "At times the stress has seemed to take over all my thoughts."

> "It was taking me back twenty-eight years to the horror of the previous surgery."

> "My stress is about my frustration at being so helpless."
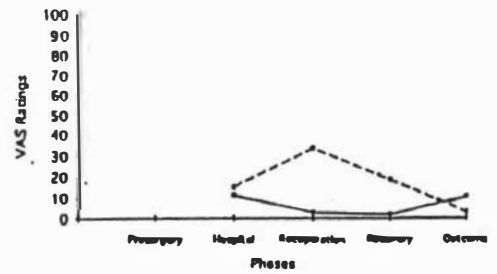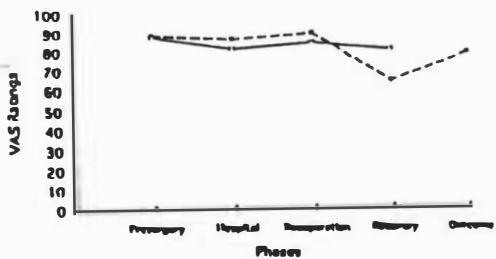
Figure 12: Mean ratings over time for the appraisals for the two groups.

The differences in the description of the stressors showed that the theme of a positive or negative general appraisal continued through to a positive or negative appraisal of stress.

Primary appraisal

Threat: Figure 12 shows that the rating for the appraisal of threat was higher for those in Group N in all the phases except the recovery phase. Over time, the participants in Group P had a much lower appraisal of threat during the presurgery phase than those in Group N. The hospitalisation phase was more threatening than the presurgery phase for the women in both groups. Those in Group N had an increase in their mean rating of threat during the recuperation phase, while those in Group P found this phase sightly less threatening than the previous phase. The women in Group N had a noticeable decrease at the recovery time, while those in Group P had an increase in their perception of threat to a level higher than the women in Group N. The threat appraisal of both groups decreased to below the initial level at the outcome phase.

Only some of the women in both groups specified the nature of the threat, and there was little difference between them. The comments tended to be focused on a specific threat connected to the particular phase of the surgery event.

Challenge: Figure 12 shows that the women in Group N had a higher challenge appraisal throughout than those in Group P. The lowest appraisal of challenge for those in Group N was at the recovery phase, otherwise their perception was steady and above the initial level by the outcome phase. The highest appraisal for those in Group P was during hospitalisation then their perception dropped sharply at the next phase then rose steadily to above the initial level by the outcome phase.

The comments from the participants in Group P tended to be relatively moderate in the description of challenge:

"It was not challenging, on the whole quite enjoyable."

"It was a bit of a challenge getting going again."

"It was to just get in there and get the job done."

Those in Group N were more likely to describe their perception of challenge more intensely:

"Very, very challenging - to improve a little more each day."

"To get up and moving as soon as possible."

"I'm looking forward, may be to doing things I've never done before."

These results suggest that there were differences between the women in the groups in the way that they experienced the surgery event. Those in Group N appeared to be involved more intensely in dealing with the situation, whereas those in Group P appeared to perceive the surgery as merely another event that needed to be managed.

Harm: The women in Group P did not find the surgery event harmful as the highest mean rating on the 100 millimetre visual analogue scales was 9.8 (Figure 12). Only two participants in Group P each described harm once only. The ratings for those in Group N were higher than those for the women in Group P at all phases. All the women in Group N found the surgery event harmful during at least one phase and this was usually related to physical harm. The women in Group N had a very high harm appraisal during hospitalisation which reduced sharply at the recuperation phase. The lowest rating of harm appraisal was at the outcome phase.

Loss: The participants in Group P did not find their surgery experience created a sense of loss as the highest mean rating was 11 (Figure 12). One of the women in Group P described some sense of loss at two phases. The highest appraisal of loss for those Group N was at the recuperation phase and their perceptions were above those for Group P during the first four phases. Two of those in Group N described some loss. For one woman it was the loss of quality of life, and for the other it was the "loss of thought" that concerned her.

Overall, those in Group N had a higher perception of primary appraisal, including a higher perception of challenge which was an unexpected finding. This suggests that the higher and more intense perceptions of the negative appraisals of threat and harm, plus stress, may have created the need to increase the challenge appraisal as well in an effort to counteract the negative effects. The lower ratings of primary appraisal for the women in Group P suggest that these combined with their initial positive general appraisal and low perception of stress to influence the coping process in a positive manner.

Secondary appraisal

There was little difference between the participants in the groups for history, repertoire, or awareness. As discussed in chapter seven all participants had a history of previous surgery experience so no one was dealing with a new experience. There was little difference overall between the women in the two groups in the range of coping strategies from which they considered they could choose. There was one woman in each

group who considered she had a wide repertoire throughout, and one woman from Group N who described a narrow repertoire throughout, otherwise the participants from both groups reported having a wide repertoire at some phases and narrow repertoire at other phases. There was also little difference between the participants in the groups in the use of strategies that were used automatically and those that were thought about first.

There was a difference in constraints between the groups. Three of the women in Group N considered that there were constraints during at least two phases. Three of the participants in Group P considered there were no constraints throughout, and the two who described reasons for not using the coping strategies they wished did so only once each. This suggests that constraints may have been a more important influencing factor in the coping process for those with a negative subjective outcome. Presumably, as these participants were sometimes not able to use their strategy of choice, this would have influenced their experience of coping and ultimately the outcome.

Tertiary appraisal

Figure 12 shows that the perception of effectiveness remained high throughout for the women in both groups. Those in Group P had a consistent perception for the first four phases and no data was necessary at the outcome phase as all participants considered that they no longer needed to use coping strategies. The participants in Group N had a similar pattern to those in Group P from the presurgery phase to the recuperation phase, then their perception decreased at the recovery time and increased again at the outcome phase. The pattern for those in Group N at the recovery phase corresponded to an increased perception of stress, and a decreased perception of threat and challenge, suggesting that tertiary appraisal may be influenced by the other appraisals.

The women in Group N were more likely to be consistent in the coping strategies that they described as the most effective. Three of the women in this group perceived the same strategy as being the most effective in three of the four phases described, and the fourth woman described two strategies only as being the most effective. In contrast, the participants in Group P generally described a different strategy as being the most effective for each phase. This suggests that those in Group P may have had more flexibility in their coping process and considered the strategy that was the most effective was the most appropriate for the phase. Perhaps the most effective strategy altered according to changes in the coping process, and this flexibility may have contributed to the positive subjective outcome.

Control

Figure 12 shows that the participants in Group P had a higher perception of control than those in Group N at all phases except the recuperation phase. The control appraisal for those in Group P remained steady for the first two phases. then their perception gradually increased at each phase to the highest point at the outcome phase. The women in Group N had a different pattern in that while their perception of control increased throughout there was a sharp rise to the highest point at the recuperation time when the level was slightly above that of those in Group P.

The women in Group P were more likely overall to describe a sense of self-control. whereas those in Group N reported a perception of external control more often. During the first two phases three of the participants in Group P reported a sense of self-control. their perception changed during the recuperation phase as all but one considered they had external control. Four of the women reported a sense of self-control at the recovery phase. and all considered they had a perception of self-control by the outcome phase. In contrast, at least three of the participants in Group N described external control for the first four phases and their perception altered by the outcome phase as all but one woman considered they had full self-control.

Clearly there was a difference between the groups in the ratings of control. but the main difference was that those in Group N considered they had less self-control overall. These differences may have influenced the subjective outcome. A lack of self-control implies that the ability to cope with the surgery event was not entirely due to the efforts of the individual and therefore the participants in Group N may not have had a sense of being able to have any control over the outcome. It is probable that the perception of external control combined with the higher perception of the negative appraisals of stress, threat, harm and a negative general appraisal to influence the negative outcome. In contrast, the women in Group P had a stronger sense of self-control and may have considered that they had more control over the outcome. This may have combined with the positive general appraisal, lower stress and primary appraisals to influence the coping process positively so that a positive subjective outcome was reached.

Reactions

Figure 13 shows the mean ratings for the women in both groups for their positive and negative emotions. These were rated on a five-point scale and averaged over the twenty adjectives. The mean ratings were converted to percentages of the highest ratings possible for the positive emotions and for the negative emotions. The women in Group P reported their positive emotions as consistently high throughout. Those in Group N
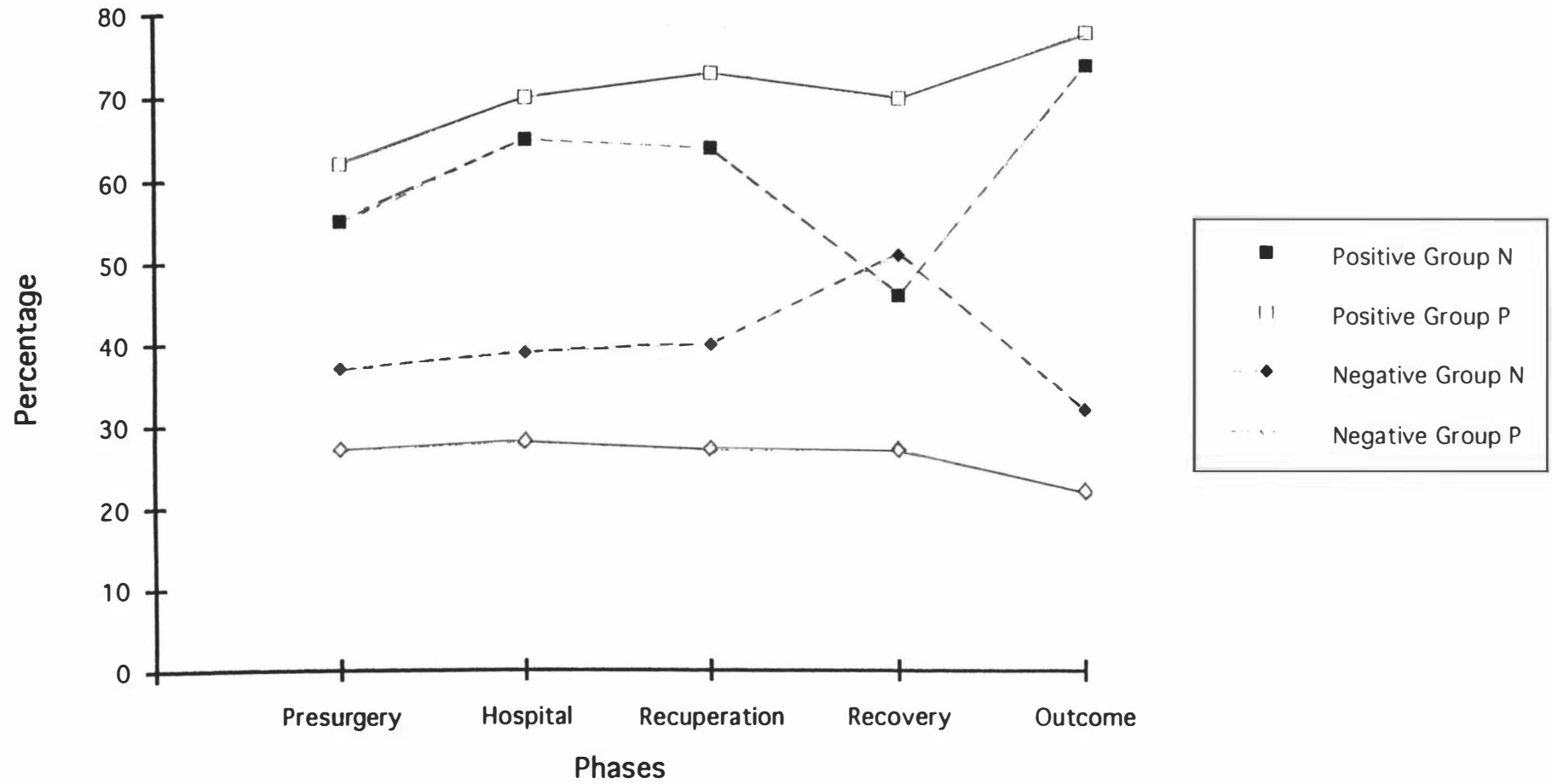
Figure 13: Mean ratings over time for the positive and negative emotions for the two groups.

perceived their positive emotions as only slightly lower, except at the recovery phase where there was a sharp decrease. This was paralleled with an increase in the negative emotions for this group during the same phase. The negative emotions remained higher for those in Group N at all times. and there was little change over time for the negative emotions for the women in Group P.

In the specific emotions that were rated. the women in Group P rated only positive emotions highly in all phases except hospitalisation where no one positive emotion was highlighted. No negative emotions were identified as being dominant at any phase of the surgery event for this group. In contrast. those in Group N identified specific negative emotions at every phase, and identified only one positive emotion, during the outcome phase.

These results show that the women rated the negative emotions much higher overall when the outcome was perceived as negative, but there was less difference in the positive emotions between the groups. In the specific emotions Group P clearly focused on positive emotions and Group N focused on the negative emotions which suggests that the negative emotions may influence a negative outcome and the focus more on positive emotions may be a factor in a positive subjective outcome.

Figure 14 shows how the participants in the two groups rated the cognitive and physical reactions differently. Those in Group N rated their cognitive reactions higher at all phases except the outcome phase. In the specific cognitive reactions those in Group N identified difficulty in concentration and rated this cognitive reaction higher at each of the first four phases. They also identified at least one specific cognitive reaction at each phase. The specific cognitive reactions were not emphasised by the women in Group P.

The pattern for the physical reactions was similar for the women in both groups as they reported an increase during hospitalisation, then their physical reactions decreased steadily through to the outcome phase. The participants in Group N rated their physical reactions higher at all times than those in Group P. The women in Group N rated pain highly at each of the first four phases and they perceived a high lack of energy at each of the last four phases. The specific physical reactions were not emphasised by those in Group P.

These results show that those with a perceived negative outcome rated the physical and cognitive reactions higher, and emphasised more specific reactions than the women who had a positive subjective outcome.
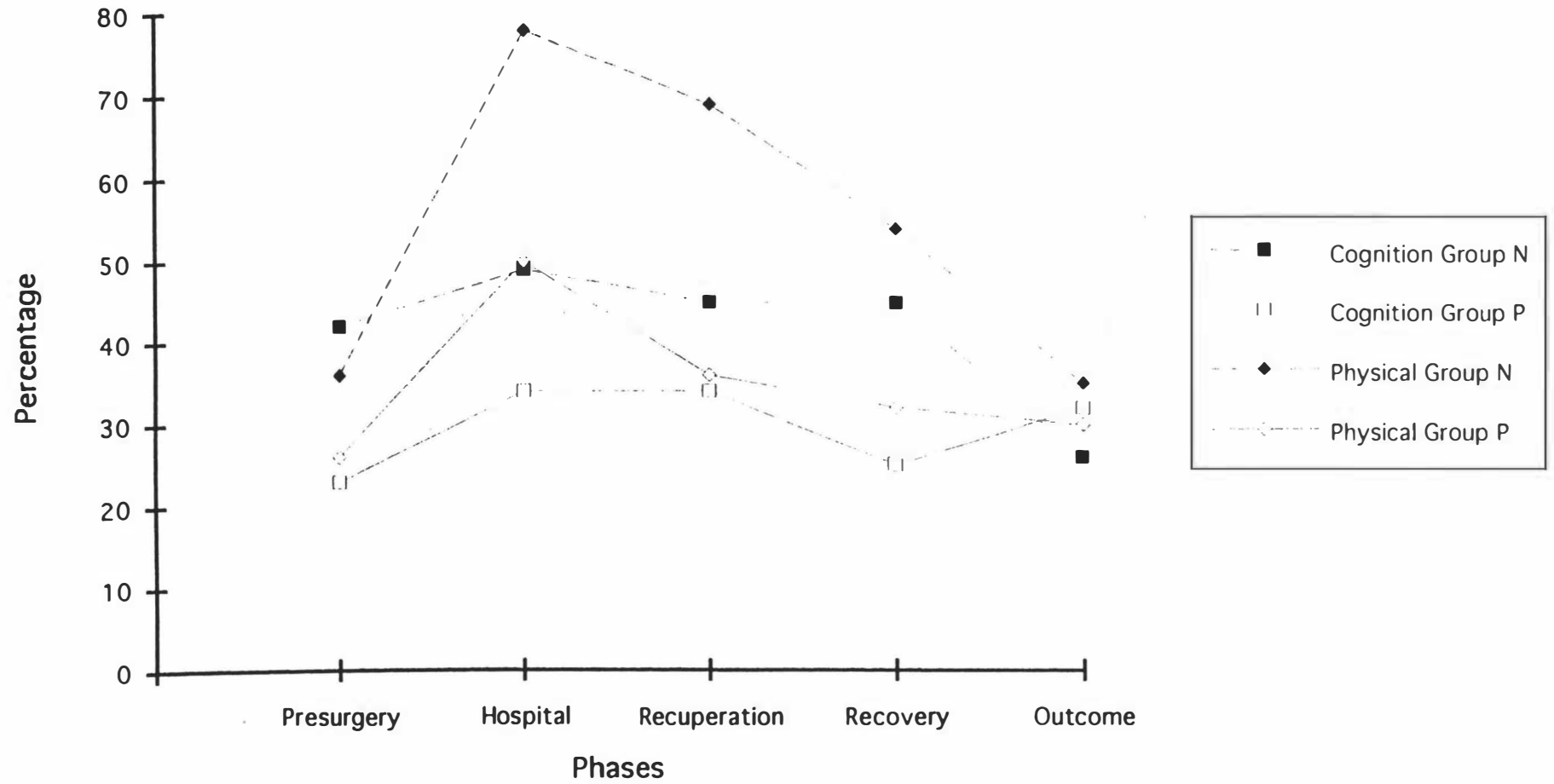
Figure 14: Mean ratings over time for the cognitive and physical reactions for the two groups.

Summary

The results show that the combination of the individual constructs in the coping process for the participants in the two groups were different. The women in Group P had lower stress. threat. challenge. harm. negative emotions and physical and cognitive reactions. higher positive emotions and a greater sense of self-control. a gradual decrease in the need for coping strategies and perhaps more flexibility within their coping process. The experiences reported by the women in Group P were generally more positive and less intense and it is possible that the positive outcome was influenced by the positive appraisal of the coping process. In contrast. the women in Group N perceived higher levels of stress and primary appraisal. reported more constraints, perceived more external control. reported more negative emotions and used slightly more coping strategies overall. They reported fluctuations in the number of strategies used at each phase, suggesting that they were needing to make more attempts at coping with their more negative experiences.

When the women's accounts were analysed for tertiary appraisal there were some differences between the groups. The women in Group P were more likely to be flexible in their perception of the most effective strategy, whereas those in Group N tended to be more consistent in the strategy they identified as the most effective. However, there was little difference between the groups on a quantitative level. It is probable that all the participants wanted to believe they were coping effectively and stated that this was the case. It appears that those in Group N experienced most of their process of coping more negatively and this combination of negative experiences ultimately had more influence on the outcome than a positive perception of effectiveness. So a positive and high rating of perceived effectiveness in itself is clearly not sufficient to lead to a positive outcome.

It was not expected that those in Group N would rate challenge higher and report more intense experiences, but it may be that it is the overall appraisal process which is important, rather than the specific primary appraisals. When one appraisal was rated more highly and perceived more intensely so were the rest, including tertiary appraisal. Since the appraisals for Group N were generally negative and more intense these may have had more influence than the challenge appraisal alone, or even more than challenge and tertiary appraisal combined. It appears that it is the combination of the participants' experiences in the coping process, and the differences which occur, that have an impact on the outcome. The examination of the differences between the groups at each phase will provide a more detailed analysis of how the participants experienced the coping process.

TRENDS DURING EACH PHASE

The current section examines the differences in the women's comments first during each phase and then over the entire coping process. A summary matrix of the qualitative data for all constructs at each phase was prepared. This was converted to frequency data for each group so that a comparison could be made for each construct. The main themes within the coping process for each group were then compared. The word 'most' is used in the present section and this indicates that three or four of the five women in Group P, and three of the four women in Group N, made specific statements.

Presurgery phase

At the presurgery phase those in Group P had few specific problems associated with the surgery, but most did have problems other than the surgery that they were dealing with at this time. In contrast, the participants in Group N all had specific problems associated with the anticipation of surgery, so it appears that from the initial stages those in Group N were already dealing with more in connection to the surgery.

In the general appraisal of the event four of the five participants in Group P viewed the surgery as positive and necessary and the fifth thought it was "no big deal," whereas in Group N three of the four had a negative general perception of the pending surgery. Two of these women were thinking about previous surgery which had had negative effects so that may have been a strong influence. Most of the women in Group P stated that there was little that was specifically stressful to them about the surgery. Most of those in Group N found that the thought of the surgery, or the reminder of previous surgery, was stressful. Clearly the women in the two groups perceived the anticipatory phase differently, and these initial appraisals may have influenced the entire coping process.

Most of those in Group P identified a high rating of control and they considered that they had a sense of self-control during the anticipation period:

> "I have reasonable control as I initiated it and made the decision to go ahead with it."

> "I am always in control of myself"

In contrast, most of the women in Group N perceived a lack of control over the situation:

> "Once I have the anaesthetic I can't do anything"

"I don't know much about the medical profession. The thrush really spooked me. I had no control over it, it was a horrible feeling".

The women in both groups perceived the nature of threat and challenge in a similar way. They perceived either no threat or a limited threat about the future, and most did not view it as a challenge but rather as something that had to be done.

There were differences in the secondary appraisal process. Four of the five women in Group P had no constraints and a wide choice of coping strategies at this time. They were more likely to use strategies automatically rather than choose them consciously, and two used new strategies. In contrast, in Group N two of the women considered that they had constraints and had considered other strategies but not used them, and three stated that they considered that they had a narrow repertoire of coping strategies from which to choose. They were more likely to choose strategies consciously than automatically.

All participants in Group P used the strategies of acceptance and social support, and four out of the five also used distraction, catharsis, relaxation and another strategy of their own choice. There was no use of ineffective strategies and three of the five participants stated that situation redefinition was the most effective strategy they used. Situation redefinition was also the coping strategy most often described as effective and the three who used it described thinking positive as their method. As one woman stated "If you are positive and accepting things go alright anyway." The use of this cognitive strategy may have influenced and strengthened the positive general appraisal which these three participants reported.

In contrast, all participants in Group N used four of the coping strategies (distraction, direct action, acceptance and social support). Two women used perceived ineffective strategies, and the strategies cited as the most effective were different for each participant. It appears that the women in Group N used a different pattern of coping strategies in an attempt to manage the situation that was clearly more negative and stressful for them and in doing so two of them perceived some strategies as ineffective.

The women in Group P reported the emotions that had the highest means at this time were the positive emotions of confident and happy. In Group N the negative emotions of afraid, agitated, anxious and apprehensive were noticeably higher than Group P, as were the cognitive reactions of rumination, lack of concentration and pain. The high rating of rumination for this group suggests that they were dwelling on the negative aspects. This is in direct contrast with those in Group P who used situation redefinition

as a positive reframing of the event. There were clearly different cognitive functions operating between the groups.

More differences were evident between the groups at the presurgery phase than any other phase of the surgery event. and the overall trend was that the participants in Group N had a more negative coping process than those in Group P. The main differences were that those in Group N had a negative general appraisal. more specific problems connected to the surgery. more perceived stress. less sense of self-control. some constraints, a narrow repertoire. the use of ineffective strategies. and the negative emotions were more dominant. It is possible that the differences in this anticipatory time were the most important in determining the remainder of the coping process and ultimately the subjective outcome. The more positive appraisal of those in Group P was evident in their general perception. their dominant positive emotions. their lack of perceived use of ineffective strategies. and their use of situation redefinition which was cited as the most effective strategy. This suggests that during the anticipation phase prior to surgery a cognitive strategy was beneficial as it involved altering the perception of the situation to something more positive.

Figure 15 shows how the women in the two groups experienced coping with the pending surgery differently during the presurgery phase, and includes a possible explanation of how their experiences within the coping process flowed. The positive appraisal process for those in Group P interacted with their positive emotions. their limited perception of stress and a sense of self-control. These appraisals contributed to their secondary appraisal process which included a wide repertoire and the automatic use of strategies. This then influenced the use of six coping strategies which were all perceived as effective. The most effective strategy was situation redefinition which could be viewed as interacting with the positive appraisal.

The coping process for the women in Group N flowed in two directions from the negative appraisal. Their experience of negative appraisal flowed reciprocally with their specific problems connected to the surgery, their negative emotions, their perception of external control and perceived stress. However, their negative appraisal also influenced their coping strategies which were chosen at the secondary appraisal process. The women reported a narrow repertoire, constraints and having to think about the coping strategies that were used. These appraisals of their resources contributed to some perceived ineffectiveness but generally the women considered they had coped with their pending surgery event effectively. Despite the negative aspects of their coping process these women still made attempts to deal with the situation and perceived positive influences in their experience of coping.
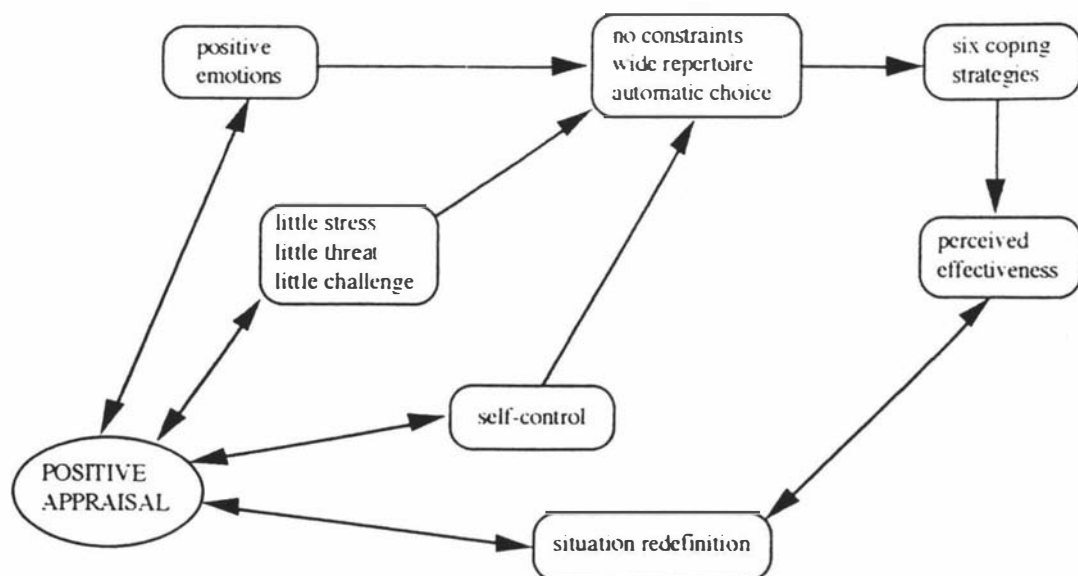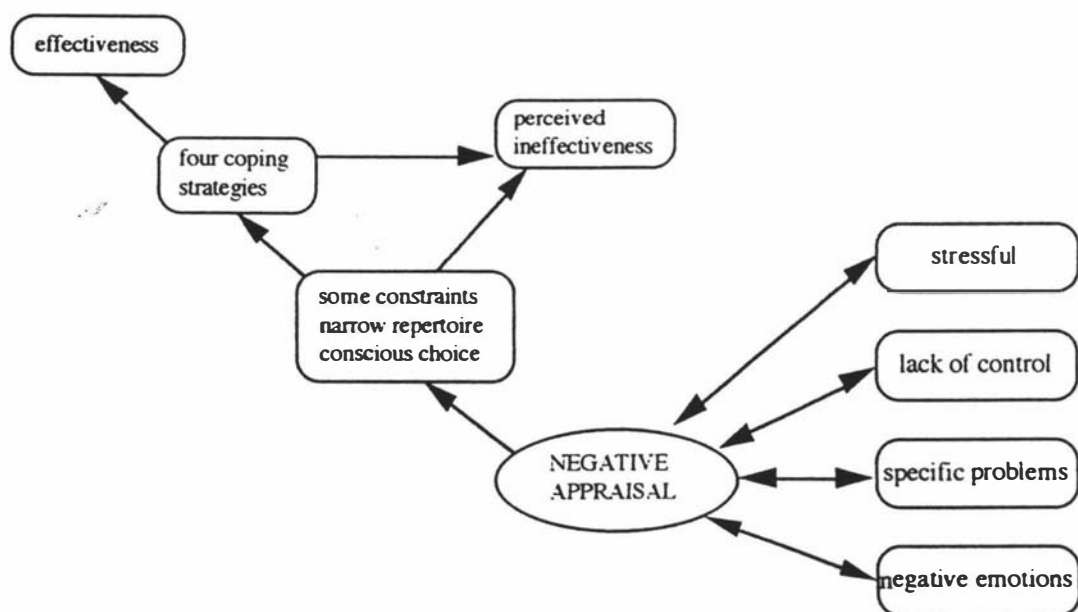
FIGURE 15: *Summary of the coping process for the two groups during the presurgery phase*

Hospitalisation phase

Most of the women in both groups found this phase stressful and had specific physical problems connected to their surgery. Those in Group P found the most stressful time was just prior to surgery and the participants in Group N related their perception of stress to specific factors connected to the surgery. Most of the women in both groups had a relatively positive general perception and a sense of coping by "going with it." This was a change for those in Group N to a more positive and accepting appraisal, and a change for those in Group P to a more negative perception of stress.

Most of those in Group P had a perceived sense of self-control but the women in Group N still perceived external control over the situation. The women in both groups found this phase challenging and six of the women considered that the challenge was in making progress during their stay in hospital.

> "The challenge is to achieve the best result I can. It is the ability to move, to make progress each day and achieve what I wanted to like getting out of bed."

> "It was good, a great challenge. Everything you do is a challenge. I just sat and got up."

There was no threat appraisal for most of the women in Group P but those in Group N considered there was some threat about what might happen:

> "I felt vulnerable so I was threatened in that way."

> "One bad experience alters a whole lot."

There was no sense of harm or loss for those in Group P. In contrast, all the participants in Group N stated that they had a perception of harm, but none had a perception of loss. So the women in both groups experienced the challenge appraisal in a similar manner as this was reported as dominant, and there were also similarities in the loss appraisal which did not feature for those in either group. However, those in Group N found the hospital phase more threatening and more harmful, which suggests that despite a more positive appraisal for this phase, the negative appraisal during the presurgery phase may have continued to influence the actual surgery stage.

The participants experienced the secondary appraisal process similarly as those in both groups reported no constraints, an even automatic or conscious choice of strategies, and most used at least one new strategy. The only difference was that most of those in

Group P stated they had a wide repertoire, whereas the women in Group N reported the repertoire to be evenly divided between wide and narrow.

All the women in Group P used the strategies of acceptance and relaxation, and most also used direct action and social support. In Group N, the participants all used the three coping strategies of acceptance, social support and relaxation, and most also used catharsis and another strategy of their choice. None of the women in Group P reported ineffective strategies, and most found social support the most effective. In Group N half of the women found social support the most effective and half thought that relaxation was most effective. There was one participant who considered that she used an ineffective coping strategy.

The emotions that the participants in Group P rated the highest were relieved, confident and pleased, but none of these emotions were noticeably higher than those the women in Group N reported. Those in Group N rated the negative reactions higher than the participants in Group P. These reactions were: afraid, apprehensive, upset, concentration, confused thoughts, pain, feeling sick or nauseous, and lacking energy. So the negative reactions continued to be dominant for those in Group N.

The women in the two groups reported a similar coping process during the hospitalisation phase. There were similarities in the general, secondary and tertiary appraisal processes, in the coping strategies used, and in those found most effective. The phase of the surgery event may have influenced the coping processes as the participants in both groups reported experiences that would be expected at the time of the actual surgery and this may have contributed to the changes that were made in the coping process. However, there were some differences between the groups. The women in Group N reported a perception of external control, appraisals of threat and harm, and more negative reactions. It may be that these negative experiences continued to influence the entire process for this group.

Recuperation phase

Most of the participants in Group P had no specific problems connected to the surgery, whereas there were still some problems associated with the surgery for most of the women in Group N. These were connected to "overdoing it," or physical problems. Most of the women in Group P found their stress was connected to the frustration at not being able to do anything. There were similarities in the control appraisal as those in Group P now had a perception of external control in that they could only "do what they were told and wait" and those in Group N continued to have a perception of external control similar to Group P as they also had to "just wait". There was a change in the

general appraisal for the participants in both groups, as they reported that their general perception was not so positive and they stated that they viewed the situation as "slow or normal."

There were differences in the primary appraisal. For those in Group P there was no perceived threat, harm or loss and very little challenge. However, those in Group N were concerned about the immediate future due to their physical problems:

> "I am worried about going to the toilet. I don't want to carry that through for the rest of my life. It is one of the reasons it was done."

> "I am worried about the immediate future and having to phone Doctor X with my temperature and report on my progress, and then having to go and see him at short notice - something must be wrong. Having to have more blood tests and another internal examination and a pelvic scan. I find the prospect that I might have to have further surgery over the next few days very frightening."

Three of the women in Group N also reported a perceived challenge "to make progress" during this phase. Harm was reported by only one woman, but loss was described by two of the women in this group.

There were no constraints for either group but most of those in Group P had a narrow repertoire with a slightly higher conscious choice of strategies. In Group N most reported a wide repertoire with a slightly higher automatic choice of coping strategies. This suggests that those in Group P considered they were more restricted in their choice of coping strategies during this phase and so had to think more about what they would use. It may be that the change to their more negative appraisal and perceived external control influenced these secondary appraisal processes.

The women in both groups used the coping strategies of acceptance, social support and relaxation. Those in Group P also used distraction frequently. Some of the women used perceived ineffective coping strategies, and the most effective strategies were different for each participant. None of the participants in Group N used ineffective strategies, and the most effective strategy identified was different for each participant.

The only reaction that was noticeably higher for those in Group P was the positive emotion of confident. The reactions which were noticeably higher for Group N were: agitated, angry, annoyed, guilty, concentration and all the physical reactions (pain, sick/nauseous, lacking energy).

There were similarities for both groups in the negative appraisal, perception of external control, the type of strategies used, and there were no constraints. There were some changes in the coping process for those in Group P, including a change in the general perception from positive to "slow and normal". There were changes to an appraisal of external control and a narrow repertoire, with some ineffective strategies and a decrease in the number of positive emotions identified. These changes suggest that a negative general appraisal may have influenced a perception of external control, a narrow repertoire, and decreased positive emotions, and influenced the tertiary appraisal process by contributing to the use of ineffective strategies.

The general perception for the participants in Group N returned to negative, there was more awareness of threat and challenge, a change to a wide repertoire and a change in the negative emotions which were dominant. While the general appraisal was negative and similar for both groups, clearly there were still differences between the groups in the coping process and these differences were probably influenced by the preceding coping behaviour.

Recovery phase

There were no specific problems connected to surgery for most of the women in Group P at the recovery phase, and there was now little or no stress. Three of the participants in Group P now considered themselves fully recovered and two of the five considered that they were no longer needing to cope with the surgery. There were still specific problems for those in Group N which were connected to reactions to the surgery. They all found the recovery at this stage stressful and this was due to either medical complications or frustration. There was now a clear difference between the groups in terms of the need to still be dealing with the surgery event.

For those in Group P who were still dealing with the surgery there was some threat but this was in connection with dealing with other people, rather than a specific connection to the recovery from surgery. There was no challenge, harm or loss and no constraints, and a perception of self control had returned. In contrast, there was still a negative perception for those in Group N with no threat, harm or loss and there was some challenge toward making progress. There was still a perception of external control for three of the women as they considered that their ability to do what they wanted was restricted in some way.

In secondary appraisal the repertoire was mostly wide for those in Group P and the number of automatically chosen strategies had reduced, with no consciously chosen strategies. Three of the women in Group N had constraints and a wide repertoire with a

high automatic choice of strategies and a higher conscious choice. All of the women in both groups used acceptance, social support and relaxation. For those in Group P, the most effective strategy was the 'other' of their choice. This suggests that as the need for coping with surgery decreased the women extended their use of coping strategies to those of their choice and they found these more effective, perhaps because they were familiar ones that were used in normal daily coping behaviour. Most of the participants in Group N found that relaxation was the most effective coping strategy, suggesting that they were still needing to deal with the surgery and therefore found relaxation most effective as a way to recover.

The women in Group P rated the positive emotions of confident, eager, pleased, hopeful, relieved and happy noticeably higher than those in Group N. This was a marked increase in the number of positive emotions from the recuperation phase. In contrast, the women in Group N reported a noticeable increase in the number and rating of negative emotions and ten of the thirteen negative emotions were noticeably higher than those for the participants in Group P. Those in Group N also reported an increase in the cognitions of lack of concentration, confused and unrealistic thoughts. They also rated pain and lacking energy higher. Clearly there was a difference in the negative emotions, cognitions and physical reactions for this group. This was also the phase that those in Group N perceived as the most stressful, and they reported a decrease in the rating of control, challenge and effectiveness, suggesting that these combined appraisals were influential in the coping process.

There was a marked difference in the coping process for the participants in the two groups at the recovery phase. Those in Group P were mostly barely needing to cope at all and were well on the way to recovery with little stress, increased self-control and positive emotions. On the other hand, those in Group N were still perceiving the situation as negative and stressful with a perception of external control and little challenge. There were constraints and a noticeable increase in the number of negative emotions and cognitions that were dominant. The women in both groups had had a more negative coping process during the preceding recuperation phase, but those in Group P were able to pick up again and state that they were recovering well, while those in Group N appeared to make no noticeable improvement in coping with their recovery.

Outcome phase

None of the participants in Group P had any need to still be coping with the surgery process by the outcome phase. They no longer perceived any stress and all reported a high level of self-control. The positive emotions of eager and hopeful were dominant.

The subjective outcome showed that all had improved or returned to prior functioning on all three of the measures. and the retrospective appraisal showed that they viewed their surgery process as positive and worthwhile overall.

Two of the women In Group N considered that they were still needing to cope a little. were using coping strategies. still had some specific problems and some perception of stress. The perception of self-control had increased for all but one of the women and there was no threat, harm or loss. but some challenge to "carry on." Several of the reactions were markedly higher than for those in Group P: anxious, frustrated. guilty, shocked, relieved, and lacking energy. The subjective outcome showed that at least one measure for each woman had not returned to prior functioning. In the retrospective appraisal the women viewed the surgery process as generally "helpless and negative."

There was a clear difference in the coping process between the groups at the outcome phase. Those in Group P were fully recovered, perceived the whole process as positive and worthwhile and were no longer needing to cope with their recovery from surgery. The participants in Group N were still perceiving problems as well as stress, were needing to cope and saw their situation as negative and helpless in retrospect.

Summary

The trend over time began with the women reporting the most differences between the groups during the presurgery phase. They reported fewer differences in the coping process at the hospitalisation phase when the participants in both groups had a relatively positive appraisal of the event, and during the recuperation phase when those in both groups had a relatively negative appraisal of the event. At the recovery phase those in Group N had a change to a more negative coping process, while most of the women in Group P were not needing to activate coping behaviour. There were still differences between the groups at the outcome phase.

More differences occurred at the presurgery, recovery and outcome phases, and this is illustrated in Figure 16 which shows the summary of the main differences and similarities between the groups for all the constructs at all phases. The shaded areas represent the consistency of a construct over time. It is probable that the general perception of the situation was an important determinant of the coping process and may have been most crucial at the anticipatory time. The general perception may have influenced the recovery period rather than the surgery itself as the women in both groups appeared to have an expected negative experience of coping with their surgery at the hospitalisation phase. The women in the two groups experienced the entire coping process differently and it appears that it was these different experiences which
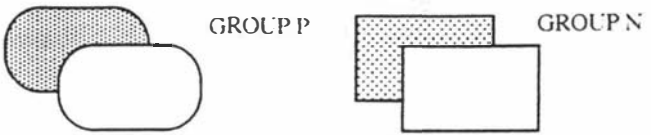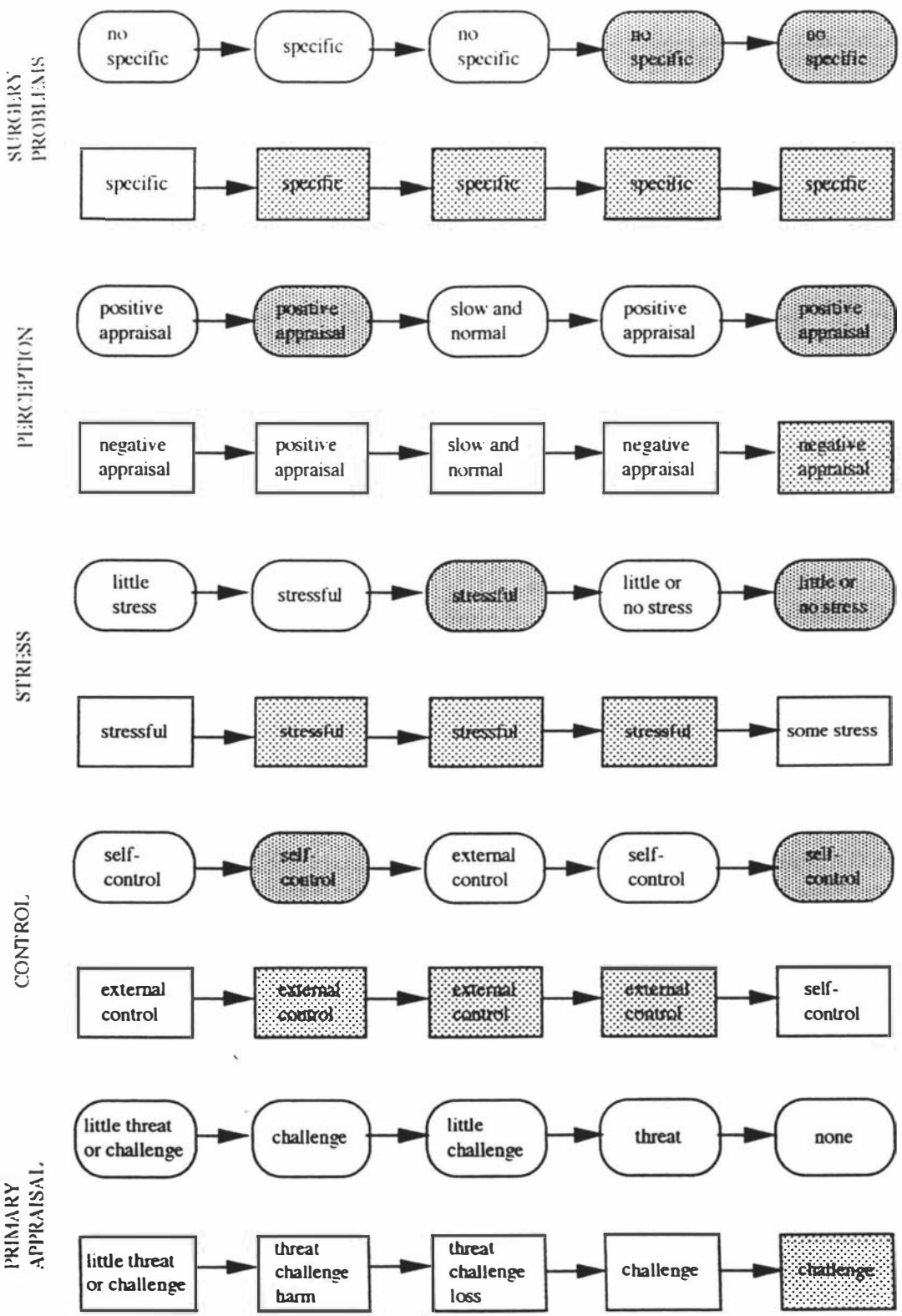
PRESURGERY HOSPITAL RECUPERATION RECOVERY OUTCOME
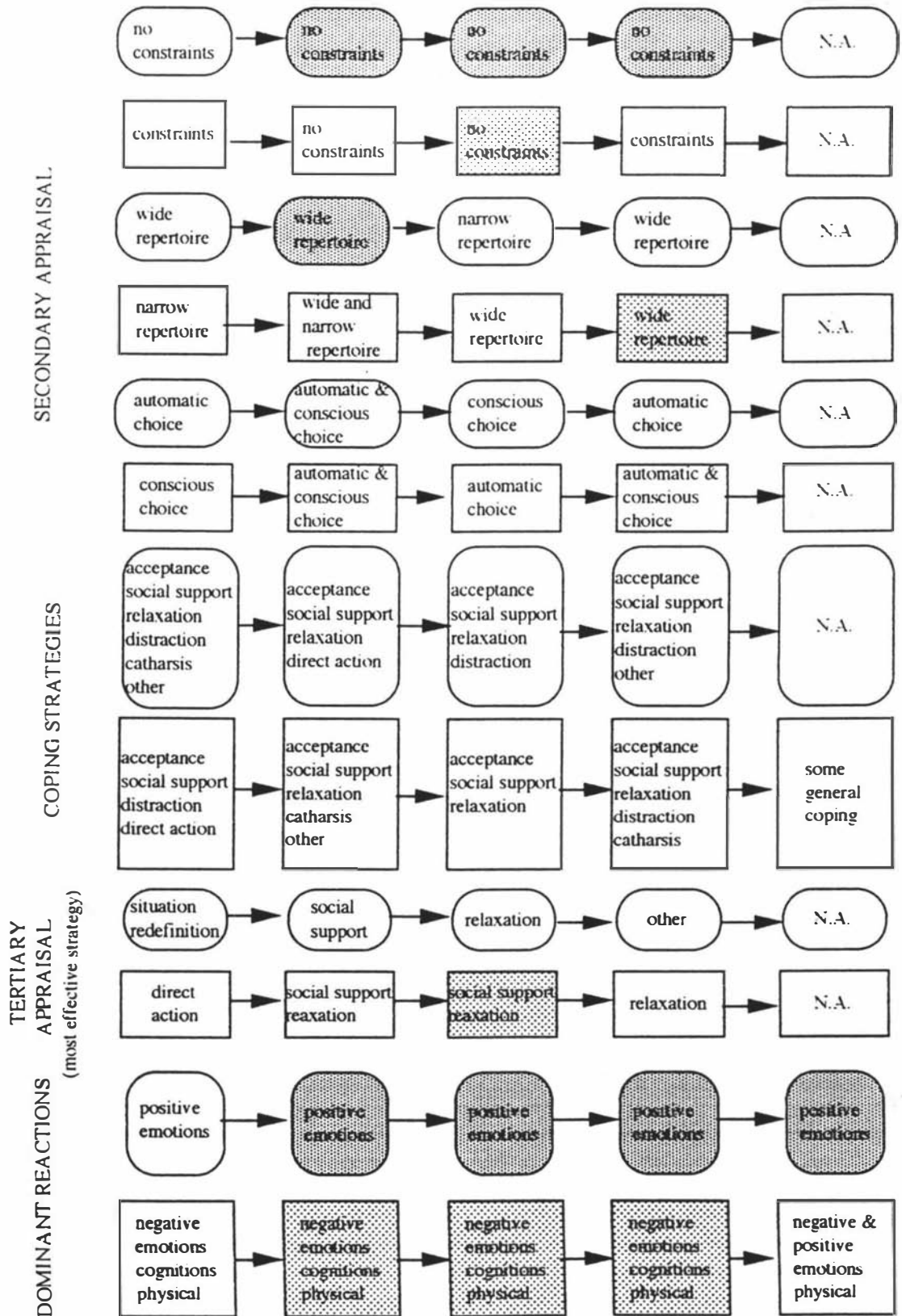
FIGURE 16: Summary of the similarities and differences in the coping process over time for the two groups

accounted for the different outcomes, rather than any specific phase or construct. The influencing factor appeared to be the different combinations of appraisal, coping strategies and reactions which were experienced by the women. In addition, the participants reported some experiences of coping consistently throughout the coping process, and other experiences changed over time. These patterns of consistent and variable experiences of coping were different for those in the two groups.

The participants in Group P began their coping process by not dwelling on any specific problems associated with surgery, they reported a positive appraisal, positive emotions and minimal negative emotions, a low perception of stress and primary appraisal and a sense of self-control. They used the highest number of coping strategies at this presurgery phase and considered that all these were effective. They had a wide repertoire from which to choose strategies, considered that there were no constraints and they used strategies which came automatically to them. In sum, there was very little that was negative or a hindrance to the coping process for those in this group at the anticipatory stage.

Some of these experiences were maintained in the hospitalisation phase as the women continued to have a positive appraisal, a perception of self-control, there were still no constraints and they continued to use a high number of coping strategies all of which they considered effective. There were also changes in the coping process as the women considered that they had physical problems connected to the surgery and they found that this was the most stressful time for them. Their perception of challenge also increased, perhaps in an effort to counteract the more stressful effects. Although there were some changes in this phase the women were still viewing the event positively and were coping effectively.

There were further changes in the coping process during the recuperation phase and the most noticeable were the change to a more negative general appraisal, a change to a perception of external control, a reduction in the positive emotions identified and a decrease in the perception of challenge. There was also some use of ineffective strategies and a change to a narrow repertoire and more use of strategies that were thought about first. Despite the changes the women continued to consider that they were coping effectively and it appears that the changes that occurred here may be due to the particular phase of recuperation, as the negative perception and lack of control were realistic.

By the recovery phase some of the women now considered they were fully recovered and in fact no longer needing to cope. Those that were still needing to cope considered that there was an increase in the positive emotions, the appraisal returned to positive, a

perception of self-control returned and there was little or no stress. The number of strategies used reduced markedly. There was some threat but this was connected to dealing with other people and could be considered a normal part of not having quite regained full independence. By the outcome phase all the women in this group were fully recovered and had a positive retrospective view of the entire surgery event.

It seems that the women in this group reached a positive subjective outcome as they viewed the event positively and realistically and held that appraisal from the initial stages, along with a sense of self-control, and positive emotions. They used a high number of strategies, all of which they perceived as effective. The changes that occurred in the coping process during the hospitalisation and recuperation phases can be considered a realistic and appropriate response to the surgery event. It would be expected that most people would need to alter their coping behaviour at the time of the surgery, and again to deal with the recuperation when the ability to continue with daily life was still reduced. The women were definitely recovering and had a return to a more positive appraisal by the recovery stage, and all had returned to normal functioning by the outcome phase. It can be considered that the women in this group dealt with the surgery event in a positive way and their coping process proceeded as would be expected given the nature of the event. The changes that occurred during the hospital and recuperation phases can be considered a normal reaction to the event which were overcome to reach a positive outcome. It is most likely that the positive experiences the women had within the coping process outweighed any negative experiences and influenced the outcome positively.

The women in Group N had a different experience of the coping process and a different subjective outcome. During the anticipation phase prior to surgery they were already focusing on specific problems connected to the surgery. They considered this phase was stressful, they had a negative general appraisal and considered they had little or no control. The negative emotions were dominant as were some cognitive and physical reactions. Constraints were reported and there was the use of some ineffective strategies although most were considered effective. In short, there was little that was positive for the women in this group as they anticipated the surgery event and these negative experiences most likely affected the entire process.

During hospitalisation the women continued to have specific problems, to find the event stressful, to have a perceived lack of control and the negative emotions were still dominant. Changes occurred as their general appraisal became more positive and realistic, there were no constraints, they had increased perceptions of threat, challenge and harm. The women used their highest number of strategies during this phase, perhaps in an effort to increase their attempts to deal with the situation. The

participants' responses can be considered realistic for this particular phase, but when compared to the women in Group P the difference was that those in Group N continued to experience a perception of external control and negative emotions and these may have influenced the process.

The coping attempts during the recuperation phase can also be viewed as a more realistic response to the particular phase of the surgery. The women continued to focus on specific problems and perceived the event as stressful, threatening and challenging but with loss more dominant than harm at this time. Their general appraisal was negative but realistic and similar to those in Group P. There continued to be a perceived lack of control and dominant negative emotions, cognitions and physical reactions as there had been during each preceding phase.

During the recovery phase the women were still focused on specific problems, found the event stressful and continued with a negative appraisal. The main changes were that challenge was the only primary appraisal which was dominant and there was a return of constraints. There was an increase in the number of coping strategies used and again there continued to be a perceived lack of control along with a noticeable increase in the dominant negative emotions. There was also a decrease in the rating of perceived effectiveness to the lowest point of all the phases. Clearly this recovery phase was negative and stressful and this appeared to be mostly due to the fact that they had medical complications or they had not been recovering as well as would be expected. It is difficult to ascertain the direction of the influence between the surgery event and the coping process. It may be that the mostly negative coping process had a negative impact on their physical well-being and recovery, or it may be the converse, or both.

By the outcome phase two of the women were still needing to cope a little and these were the two with complications, and they continued to focus on specific problems and perceive some stress. All the women in this group had a negative retrospective appraisal of the entire event and they continued to identify negative emotions, although for the first time a positive emotion was dominant. There was also a change for the first time to a perception of self-control.

It is possible that the women in Group N had a negative subjective outcome as the presurgery phase was so negative for them, so that despite increased attempts at coping and some more positive changes the initial negative appraisals continued to influence the entire process. There was a focus on specific problems throughout which can be viewed as another form of negative cognitive appraisal, and there was a perception of external control and a prevalence of negative emotions throughout. It is possible that these were influencing factors over the entire process and when the same aspects are

compared to Group P they generally did not focus on specific problems or have a perceived lack of control except during the hospital phase, and the positive emotions were present throughout. It seems that it was the negative coping process which determined the negative outcome.

The preceding description has begun to reveal that both groups had some consistent coping experiences (which were reported or maintained at all of the first four phases) and some changes in their experience of coping (which fluctuated over time or were not reported at each of the first four phases). Figure 17 shows the consistent and variable patterns in the coping process for the first four phases for both groups. There were two consistent experiences of coping that both groups had in common: the two coping strategies of acceptance and social support; and consistently high tertiary appraisal. Those in Group P had consistently low stress and negative emotions, high positive emotions, the ratings of control remained steady, the coping strategy of relaxation was used at every phase and there were no constraints. These can all be considered positive in terms of coping with the surgery event. The women in Group N reported specific problems in connection with the surgery at each of the first four phases and they consistently reported external control over the surgery event. These can be considered negative influences on the coping process. It is possible that the consistent experiences that differed between the groups were contributing factors to the different outcomes, as these would have helped to maintain the positive or negative influences that had been established at the presurgery phase.

The changes in the coping process that were common to both groups were: the general appraisal, which fluctuated between positive and negative; primary appraisal, which varied in the ratings and the nature of the appraisal; repertoire, which fluctuated between wide and narrow; awareness, which could be either automatic or conscious; and the coping strategies of catharsis, direct action distraction and 'other' varied in the phases in which they were used by both groups. The main change for those in Group P was the fluctuation between self-control and external control, plus they were flexible in the strategy that they perceived as most effective. The women in Group N reported constraints in some phases only, their ratings of stress remained relatively high but varied across the phases, and their positive and negative emotions varied.

CONCLUSIONS

The main conclusion that can be drawn is that there were clear differences in the coping process between those who perceived the outcome as positive and those who perceived it as negative. Those in Group P had a relatively stable and expected response in the way they coped with the surgery event. When their coping experiences were more

CONSISTENT   VARIABLE

low stress

ratings of control

no constraints

relaxation

low negative emotions

high positive emotions

most effective
strategy

self/external
control

GROUP P

positive
outcome

acceptance
social support

ratings of
tertiary appraisal

general appraisal

primary appraisal

repertoire

awareness

catharsis
direct action
distraction
other

GROUP N

negative
outcome

specific problems

external control

most effective
strategy

stress

constraints

emotions

*FIGURE 17: Diagram showing the consistent and variable constructs in the
coping process for the two groups for the first four phases*

negative these appeared to be a response to the actual phase of the event. In contrast, the fluctuations that occurred for those in Group N appeared to be more a factor of the coping process itself rather than the event. The coping process for those in Group N was more negative overall and varied more from phase to phase. Their coping process during the hospitalisation and recuperation phases was very similar to those in Group P, suggesting that they also had the expected response to the surgery event at these phases. So the difference in the outcomes appears to have been generated from the presurgery stage. There was a similar coping process for the two groups through the expected negative phases of hospitalisation and recuperation and then the differences returned for the recovery and outcome phases.

The second conclusion is that the most influential factor in the differences between the two groups appeared to be the general appraisal process during the anticipation period. The women in Group P began with a positive appraisal and those in Group N began with a negative appraisal. These perceptions appeared to create expectations about the surgery event which impacted on the coping process and ultimately contributed to the positive and negative outcomes. It can be suggested that this initial appraisal had an influence on the recovery process rather than the actual surgery as both groups dealt with the hospitalisation and immediate recuperation periods in a similar manner.

Third, it is clear that it was the appraisal process rather than the coping strategies which had the major effect on the coping process and ultimately the outcome. The appraisals which appeared to contribute the most to the outcome were the combination of the general appraisal, the stress appraisal and particularly the control appraisal, rather than primary or secondary appraisal. There was little evidence that primary appraisal alone was influential. Constraints were the only secondary appraisal process which may have had an impact, but again these were influential as interactive parts of the coping process,

It appears that neither the frequency and type of strategies used or the perceived effectiveness of these strategies were influential in the outcome as these did not differ noticeably between the groups. There were similar strategies used by both groups but the patterns in which they were used varied slightly. These different patterns may have contributed to the different outcomes but the coping strategies themselves were not major influencing aspects. The crucial role for the coping strategies was the way they interacted with the appraisal and reactions.

Fourth, there were some patterns that were consistent and some patterns that were variable in the coping process for the surgery event. The coping process for those in Group P had more consistency, which suggests that this was a major influence on the

positive outcome. There were several variable aspects which were common to both groups. but the way they varied or the phases in which they occurred differed. This suggests that it may have been the particular combination of aspects and/or the way these aspects interacted at any given phase of the surgery event which determined the outcome.

Finally, there was no difference in the tertiary appraisal ratings between the groups. This suggests that although the coping process was clearly different for the groups. those in Group N still considered subjectively that their use of coping strategies was just as effective as those in Group P. So the crucial factor may be the process itself and the interaction that occurred. rather than the participants' perception of tertiary appraisal. Perhaps those in Group N really wanted to believe they were coping effectively but the negative influences ultimately outweighed this attempt at an effective perception and contributed to a negative outcome.

The division into two groups allowed a finer-grained analysis of the data and began to determine some of the influential factors in the coping process involved in dealing with the event of surgery. There are still some limitations to this approach as it is difficult to determine any definite relationships as there was still variable data. This variability suggests that the coping process is actually very individual so it is important to examine it on an idiographic level. The responses for two women from each of the two groups were selected as case studies to explore the data at this level and these are described in chapter nine.

CHAPTER NINE:

CASE STUDIES: FOUR VIEWS OF THE COPING PROCESS

The case studies provided the opportunity to examine the coping process for the surgery event at a fine-grained level, and to ascertain the similarities and differences at an individual level. Four participants were chosen for the case studies. The first two case studies presented were participants who had positive outcomes. One was a random choice and the other was chosen as she had an expected shorter recovery period due to the type of surgery she had and it was thought this may make a difference to the coping process. The other two were women who had a negative outcome and they were chosen as they had the most severe complications.

CASE STUDY ONE

Mrs K was a 45 year old woman who lived and worked on a farm, caring for her dependent foster children. Her surgery was a hysterectomy under a general anaesthetic and she did not encounter any complications in her recovery. After her post-operative check she reported that the surgeon was "very pleased about things" and also all medical tests were clear. Mrs K's subjective outcome matched this and she stated: "I feel wonderful compared to what I was feeling before the operation."

At the first interview she described her way of generally dealing with stress as "I talk about it to (husband) and I cope with stress pretty well because I have always had a job that's been stressful. I don't worry about things that I can't do anything about and just relax and let things happen. I'm quite prepared to talk about it." This statement indicates that Mrs K was aware of her existing coping behaviour and that she considered her ability to deal with stress was effective. Her statement about her cognitive processes suggests that her appraisal of the situation had an influence on her coping behaviour. This became evident as she described dealing with her surgery.

Throughout the process of coping with her surgery Mrs K maintained a positive perception of her situation by looking forward: "it's a chance to get better and get home;" and using her judgement to maintain the recovery process "I feel ready to do things but am unable to because I've been instructed not to and common sense tells me not to." Another way she maintained her positive appraisal was by tending to counteract any negative comment with a positive one. For example, when describing her emotional reactions at the hospitalisation phase she stated "I don't really like that but at the same time I'm grateful, so it sort of balances." Her retrospective appraisal at the outcome phase also indicated her consistently positive perception as she stated "I think I coped

with my recovery quite well. I had a lot of help........ I feel quite good about it. I know it was a good thing to do and I'm quite pleased with the way things worked out, no problems anymore." It is likely that her overall positive appraisal influenced the entire coping process and the basis for this may have occurred at the anticipation phase: "I'm focusing on how good it's going to be. Basically I just think it will all be over with and that will be such a relief. I'm not thinking much about the actual operation but about what it's going to be like when I get past the nasty bit."

In spite of a positive perception the presurgery phase was the most stressful time for Mrs K and it was the thought of the surgery which she was finding stressful: "I'm hoping I won't be too flattened by the anaesthetic. I've been taking iron tablets, I'm hoping everything will go fine. If you think about things that will go wrong you will find something that you expect to." As the surgery and recovery progressed there was a gradual decrease in her perception of stress. The nature of this altered over time and at the hospitalisation phase she was aware of being very anxious prior to surgery and found the fact that she was 'doped' stressful. At the recuperation phase her stress was about "some frustration at not being able to do things," by the recovery phase there was "very little" stress and none at all at the outcome phase. Although there was a decrease in her quantitative rating of stress this was actually at a low level throughout. Figure 18 illustrates the low rating of stress and also shows the ratings of the visual analogue scales for control, threat, challenge, harm, loss and effectiveness over time.

As her stress decreased her perception of control increased over time, suggesting how these two appraisals flowed reciprocally. The nature of the control also changed over time. During the anticipation time she did not consider that she had very much control but counteracted this by saying "I suppose I have some control but I hope I don't have to use it." At the hospitalisation phase her sense of control increased "I suppose I had a fair bit of control because I would ask for something. I would think I would have a fair bit of control because I didn't wait for them .... I just had to mention it and that indicates that I was really taking over." At the recuperation phase her perception of control was linked to waiting for her body to heal itself and by the outcome phase she was "pretty much in full control being able to do everything I want to, do whatever and go wherever I like." Her rating on the visual analogue scales indicated that the level of control from the hospitalisation phase to the outcome phase was at a relatively high level (see Figure 18).

It is probable that Mrs K's positive appraisal flowed reciprocally with the low level of stress and high level of control throughout and that these contributed to a consistently high perception of tertiary appraisal and the fact that she found all coping strategies effective. The strategy that she found most effective altered over time from catharsis at
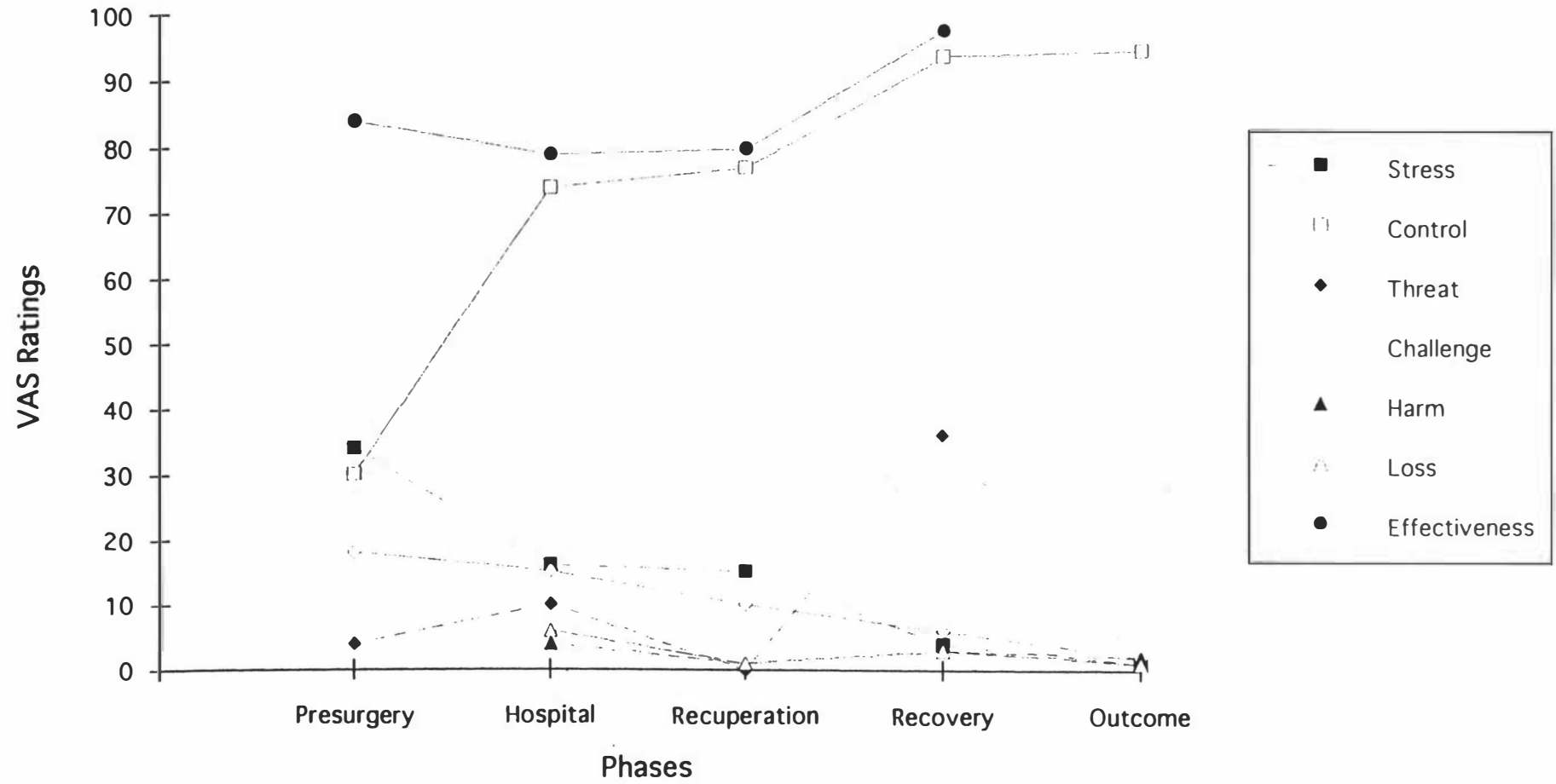
Figure 18: Ratings of appraisal over time for Mrs K

the presurgery phase, to support, spiritual comfort and distraction at the hospitalisation phase, and support only at the recuperation phase. This indicated that the perception of what was effective altered according to the stage of the coping process. She stated that she knew that the coping strategies had been effective because she started to get better and continued to feel better and fitter every day so that by the recovery phase she knew they were effective because of "my return to normal life without any hassles."

The increase in control and decrease in stress is clearly indicated in Figure 18 as is the high tertiary appraisal throughout. The graph also indicates that primary appraisal generally was not meaningful for Mrs K and this was confirmed by her statements of "not much," (threat and loss),"not at all," (threat and challenge), "a bit of a challenge getting going again," and "such a release that it was not harmful at all. I have a scar but I had a scar before .... what I was experiencing before was more harmful." The one exception was an increase in threat at the recovery phase but her comments revealed that this was not connected to surgery but to family difficulties. It may have been that her overall primary appraisal was sufficient so there was no need for specific primary appraisals.

Mrs K's secondary appraisal processes were very clear and uncomplicated. She stated that she had a wide range of coping strategies from which to choose throughout and that these were things that she was used to doing and they were readily available. This was supported by the fact that she stated that she used the majority of the coping strategies automatically rather than making a conscious decision. She did use new strategies at the presurgery and hospitalisation phases, suggesting that her repertoire was sufficiently flexible to find new strategies when necessary. She reported no constraints throughout and this probably contributed to her effective coping behaviour. Another contributing factor to her perceived effective coping may have been that she had had two previous operations involving general anaesthetic, one being major with some severe consequences and as she stated "I imagine it'll be much the same as the caesarean and the after effects will be the same .... I don't really have any fears about what will happen. Another important aspect historically is the lead up to her decision to have the surgery "I did a lot of thinking when I first approached the G.P., so I had basically thought the issue through and decided I had to do something. For a while I thought that it would go away, I would get over it so I had done all that kind of thinking before I approached the G.P. who sent me to Dr X."

The clarity surrounding Mrs K's secondary appraisal processes appeared to have contributed to the use of perceived effective coping strategies. The number of strategies used decreased as the surgery process unfolded from eight at the presurgery phase, to seven during hospitalisation then five and two for the recuperation and recovery

periods. This parallels the increasing sense of control and the decreasing perception of stress over time. Two coping strategies were used every time (support from family and friends and spiritual comfort) and the other strategies altered, both in the type of strategy used and what was used within a strategy, as the situation altered. For example, Mrs K used distraction from the presurgery phase to the recuperation phase and this changed from being diverted through doing daily activities, to just focusing on day to day and talking, to doing some specific work for a local committee. As time progressed she stopped using some of the strategies. Mrs K's data shows clearly that more than one strategy was used at a time and that the usage of coping strategies was variable for her.

Generally Mrs K's positive emotional reactions remained high throughout and her negative emotions decreased over time as did her cognitive and physical reactions. These reactions were generally consistent with all the other aspects but there was one exception at the hospitalisation phase when her positive emotions decreased, and her negative emotions and cognitive and physical reactions increased and at the same time her perception of tertiary appraisal was the lowest. This suggests that during the hospitalisation phase a change occurred in her reactions which influenced her perceived effectiveness of the coping strategies, although the other aspects were not affected as they remained stable.

Summary

The coping process for Mrs K as her surgery and recovery unfolded was generally very positive, effective and uncomplicated and by the outcome phase there was no need for her to be dealing with the event. Figure 19 shows the probable reciprocal flow between the appraisals, coping strategies, reactions and outcome. She maintained a positive appraisal throughout and this influenced the entire process and ultimately led to a positive outcome. Her secondary appraisal processes were flexible and clear and these flowed reciprocally with consistently high tertiary appraisal. Her secondary and tertiary appraisal processes contributed to a decrease in the perception of stress and the number of coping strategies, and to an increase in the perception of control over time and the reactions altering over time to have stabilised as expected by the outcome phase.

It is evident that Mrs K's experience of coping altered over time and the nature of stress, control, the most effective strategy, the strategies themselves and the number used changed at each phase of the surgery process. These changes were presumably her efforts to manage the surgery event and altered according to the phase. Her responses were as expected for dealing with surgery, and as her recovery progressed the changes in her coping experiences altered accordingly. The consistent pattern that Mrs K maintained throughout included a wide repertoire, suggesting she always had the
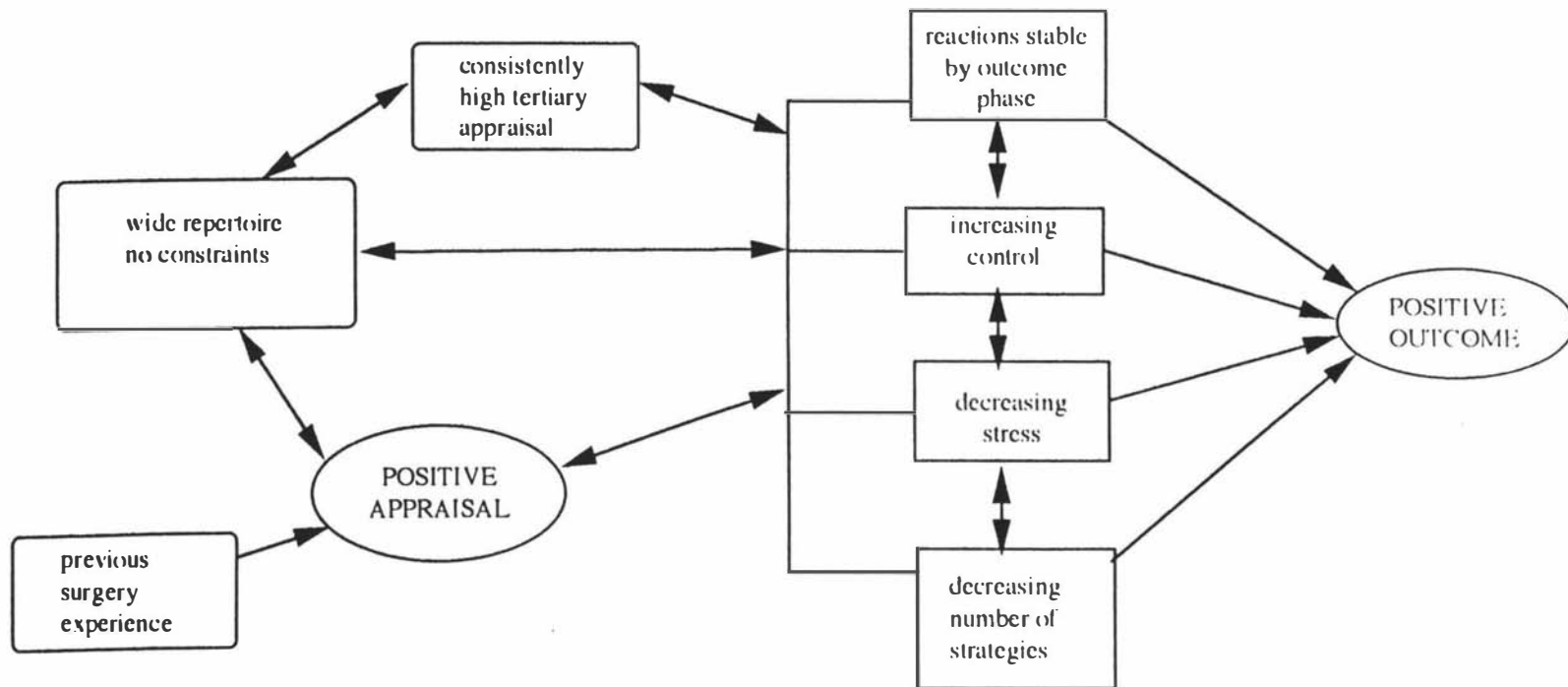
FIGURE 19: *Summary of the coping process for Mrs K showing a reciprocal flow between the constructs*

necessary and appropriate coping strategies from which to choose. She reported no constraints. suggesting the coping strategies she wanted to use were always available, and she had a consistently high perception of how effective the coping strategies were. The most consistent aspect was her positive appraisal and this was the most likely major contribution to her effective and uncomplicated coping process.

CASE STUDY TWO

Mrs L was a 56 year old business woman with adult children. Her surgery was a vaginal hysterectomy and a pelvic repair of the bladder and bowel, performed with an epidural anaesthetic, and there were no serious complications. After her post-operative check she reported that the surgery had been successful medically and her subjective outcome was also positive as she was "considerably better and I feel great, there's no doubt about the improvement." Mrs L's recovery was expected to be quicker as she had not had an incision or a general anaesthetic. This was the case as she considered at the recovery phase that she was fully recovered. Therefore total data was available for the first three time periods only.

Her comments concerning her method of generally dealing with stress suggested that she had an awareness of her existing coping behaviour "I lead a pretty demanding life so I have to be careful that I look after my physical state first and foremost .... that I get enough respite from whatever I am doing .... the way I go about dealing with problems is that I first of all have to accept and acknowledge there is a problem there and then find out information about it and see what is necessary to be done about it and then make arrangements to have the problem solved." This awareness was a noticeable factor in her process of coping with her surgery and was evident in her description of the lead up to her having surgery and her preparation for the situation.

This preparation had commenced four years previously: "The first time I went to see him (the doctor) about four years ago he was busy telling me what to do and I fainted in his arms! It took me four years to go back, so I've really thought about it for a while ...... the acceptance was really a long way back, it almost got to the point where the operation itself was the climax of it." She also made a specific effort to plan for her revisit to the doctor four years later "I really did a lot of preparation because about four months before going to the doctor I conscientiously lost about two stone and went onto a fitness programme and that was distinctly knowing that when I was down in weight I would go and see the doctor. And that was distinctly between me and me, I didn't tell anybody else I was doing that." These statements suggest that Mrs L had the ability to deal with the pending event in a self-sufficient manner by planning and preparing. This appeared to be one of the major influences on her acceptance of the situation and may

have been the major determinant of her appraisal and coping strategy process which contributed to a low level of stress throughout.

The most stressful time for Mrs L was the presurgery period when it was the "thought of the discomfort afterwards ... getting everything going again and getting up and about and having to put up with feeling uncomfortable and sore ...... I'm beginning to wonder at this stage why I'm going through with it." She did not find the hospitalisation or the recovery period at all stressful and again her preparation and acceptance was noticeable. At the recuperation phase she commented "I'm not finding this stressful, I was prepared for a lengthy recuperation period and can do nothing else about it so I'm making the most of it and loving it so much. The only stress comes from the thought of ever having to get back into harness." At the recovery phase: "it has not been stressful, mostly because I was completely prepared for it."

Her low rating of stress was paralleled by high rating of control throughout as illustrated in Figure 20. Figure 20 also shows the ratings on the visual analogue scales for threat, challenge, harm, loss and effectiveness. The nature of the control remained relatively stable and was linked to her sense of self-control. At the presurgery phase her preparation was again important as she considered that she had "a reasonable amount of control, after all I've initiated it and made the decision to go ahead with it." At the hospitalisation phase she considered that she did not have any control in the operating theatre but considered that as she had put herself in that situation and was allowing things to happen then she did have control. At the recuperation phase she was aware that "trying to do too much too soon is going to hinder ultimate progress .... so I am in control of what I do and do no more than I need." This sense of self-control over her situation was still prevalent at the recovery phase.

Her high perception of control corresponded with a consistently high tertiary appraisal throughout (see Figure 20), although data for her perceived effectiveness was only available for the first three phases as she did not consider that she was needing to cope at the recovery phase. She perceived all coping strategies as effective throughout and the one she identified as most effective changed each time. Mrs L considered two strategies were most effective at the presurgery phase: situation redefinition by "looking at it from the point of view that it's going to make things better in the future," and catharsis through talking about it. At the hospitalisation phase this changed to support from family, friends and staff and at the recuperation phase she found all strategies most effective and stated that "I used them all as a combination and think that was far more effective than just one strategy." She contributed their effectiveness at the presurgery phase to her positive perception as "I am quite calm about the whole thing, accepting that it's not going to be particularly pleasant but there's not much point
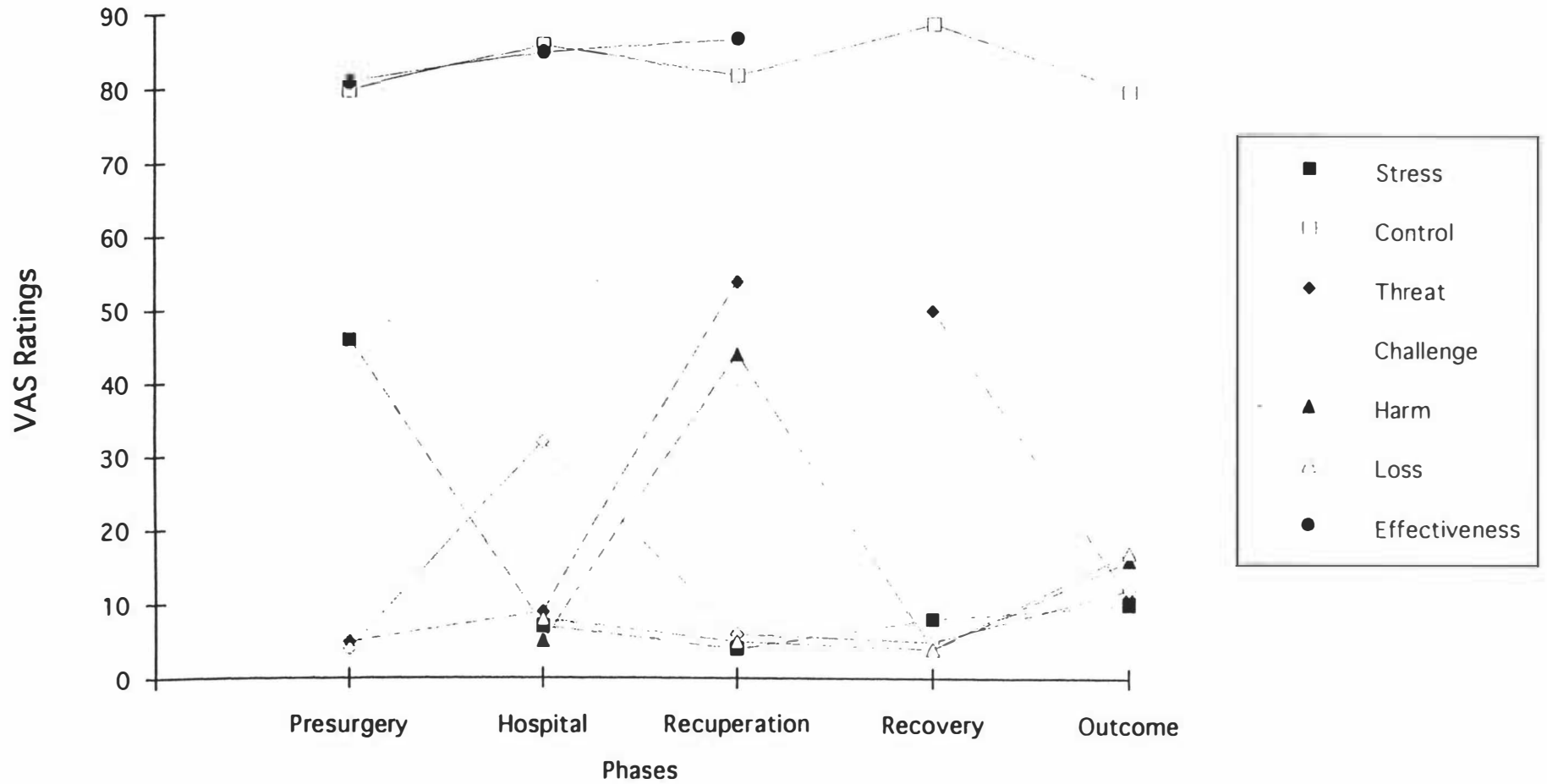
Figure 20: Ratings of appraisal over time for Mrs L

dwelling on it. I just accept it will be better in the long run so I guess they must be." An additional factor here is that the coping strategy of situation redefinition can also be viewed as appraisal so this would have strengthened her existing positive appraisal. At the hospitalisation and recuperation phases she knew the coping strategies she used were effective because of the fact that she was feeling better.

Figure 20 shows clearly that Mrs L's ratings of control. stress (after the presurgery phase) and tertiary appraisal were consistent. The primary appraisal ratings were more variable with the exception of loss which remained at a low level overall. Threat was very low for the first two time periods and she commented at the presurgery phase that "I don't think threatened is the right word for the way I feel. perhaps a little anxious about it but not particularly threatened." During the two recovery periods her perception of threat increased for different reasons each time. At the recuperation phase she became concerned that her recovery progress had been threatened as she "jeopardised its progress with a stupid and unnecessary action ..... I've been bleeding profusely, bit scared to move since then." At the recovery phase she stated that she was very worried "but it has nothing to do with surgery, in fact having the surgery out of the way is a relief." The increase in the perception of threat at the recuperation phase corresponded to the only peak in harm and this was connected to the possible harm she thought she may have done to her body. The perception of challenge also decreased at the recuperation phase after the peak at the hospitalisation phase when she had found the lead up to the surgery challenging, but overall Mrs L did not identify a sense of challenge but rather saw it as "something that has to be done." and this statement of necessity summarised her general perception of the situation.

She viewed her surgery as necessary at the presurgery phase: "the sooner I get it done the freer I'm going to be. Although I'm not particularly looking forward to having it done it's going to make things easier." This appraisal can be interpreted as positive in the sense that it describes her confidence about the outcome and this corresponds to her confidence about her preparation and planning for the event and appeared to influence an enjoyable recovery period for the most part. She described her hospitalisation as "very pleasant. I really enjoyed my stay." At the recovery phase she stated 'I feel fully recovered," and her retrospective perception continued with the theme of enjoyment: "I had a delightful time at home gradually recovering and I thoroughly enjoyed the pace of life and opportunity to relax and do things I normally do not have time for. I found it most enjoyable and I was most reluctant to return to my usual stressful routine." At the recuperation phase her generally positive perception was a little lessened as she became aware that she was trying to do too much and that this was hindering her progress. However, she was able to acknowledge that what she did was in her control and that the

surgery was generally very positive "I felt the surgery was excellent and my body responded well .... but I always feel I have to push to the limits and if I'm not doing so I feel guilty, but doing so threatens my progress."

Mrs L's secondary appraisal process was consistent in that she had no constraints throughout, but other aspects varied a little. At the presurgery phase she stated that she had a wide repertoire and at the hospitalisation and recuperation periods she considered that her repertoire was narrow as nothing else was needed. She thought her coping skills had developed from previous experience and "a life-long learning process." Her comments endorse these statements and also show her awareness of her general coping behaviour: "I deal with a great deal of stress. I'm director of my company and it's very stressful if we allowed it to be and over the years we have developed quite a method of coping and as much of that is being able to govern yourself as being able to cope in situations." She used one new strategy at the presurgery phase (seeking emotional support from other women) and used this same one plus another (spiritual comfort from others) at the hospitalisation phase. The reason she gave was that she was now "a little older and wiser and can see the benefit." She also described these strategies as the ones that she chose consciously, as well as relaxation and she stated that these were learned behaviour. All other coping strategies she used automatically "the rest of them I think I would do all of those regardless of what the stressful situation was."

Mrs L used eight coping strategies at the presurgery phase, this decreased to five at the hospitalisation phase and increased to seven at the recuperation phase when her potential complication occurred. At the recovery phase she commented: "I have recovered and am no longer thinking of it. Been and gone and completed. Have gone beyond the stage of needing these." She used all of the listed strategies at least once and used four of them every time (diverting attention, acceptance, support and relaxation). Her description within each strategy remained reasonably consistent over time, with some variability in the different activities within diverting attention, relaxation and spiritual comfort. At the first interview she commented several times on the importance of acceptance to her "you do have to get to a point of acceptance" ..... "I have accepted it and that's it" ..... "I just accept it will be better in the long run," and she stated that acceptance was the first coping strategy that she used. In her case she had taken four years to get to this point and with her preparation this appears to have been the main determinant of her coping process for surgery.

At the presurgery phase there was little difference between her negative and positive emotions, as both were rated low. Her positive emotions increased at the hospitalisation phase and remained steady across to the recovery phase, and then decreased at the outcome phase. Her confidence was high throughout which is consistent with her

positive appraisal process. Her negative emotions were relatively low over time. They increased at the recuperation phase. which corresponded to an increase in her cognitive reactions. and this was the time she thought she had harmed herself physically. Her reactions were consistent with her positive experience of coping and the high positive emotions reflect the low stress. high control and positive appraisal over time.

Summary

Mrs L's coping process over time was relatively stable. with some variation at the recuperation phase when she had some temporary physical damage, and by the recovery phase she considered she was fully recovered and no longer needed to use coping strategies. Figure 21 shows the probable reciprocal flow between the appraisals. coping strategies. reactions and outcome. The preparation prior to the surgery and her acceptance throughout the surgery event appear to be the main determinants of her process of coping and these reciprocated with a flexible secondary appraisal process and consistent stress. control. tertiary appraisal and emotions with positive appraisal throughout. These processes ultimately contributed to a positive outcome. There was some variation at the recuperation phase but her positive appraisal. low stress. high control and tertiary appraisal contributed to her ability to overcome this specific incident which did have a positive outcome. Most of Mrs L's appraisals and emotions were consistent over time and. as for Mrs K. when there were changes these were a response to the particular phase.

The fact that acceptance was a major determinant and that she identified it as her first step suggests that the coping process may begin at any point. in this case with a coping strategy. It may also be argued that acceptance has a mainly cognitive component therefore an appraisal process was also occurring. The same could be said for the other main influence of preparation and planning, which have elements of coping strategies and appraisal. particularly secondary appraisal as her awareness and previous coping experience played an important role.

CASE STUDY THREE

Mrs M was a 52 year old self employed woman who lived at home with her husband and teenage son. She had triple surgery: a hysterectomy, a pelvic repair and an orthopaedic operation for carpal tunnel syndrome. She had complications throughout the entire process with persistent pain and problems retraining her bladder. She was on medication and was still in pain at the final interview. After her post-operative check she said the gynaecologist informed her that her difficulties with her recovery were all in the mind and she was left wondering if it had all been worth it. She considered that
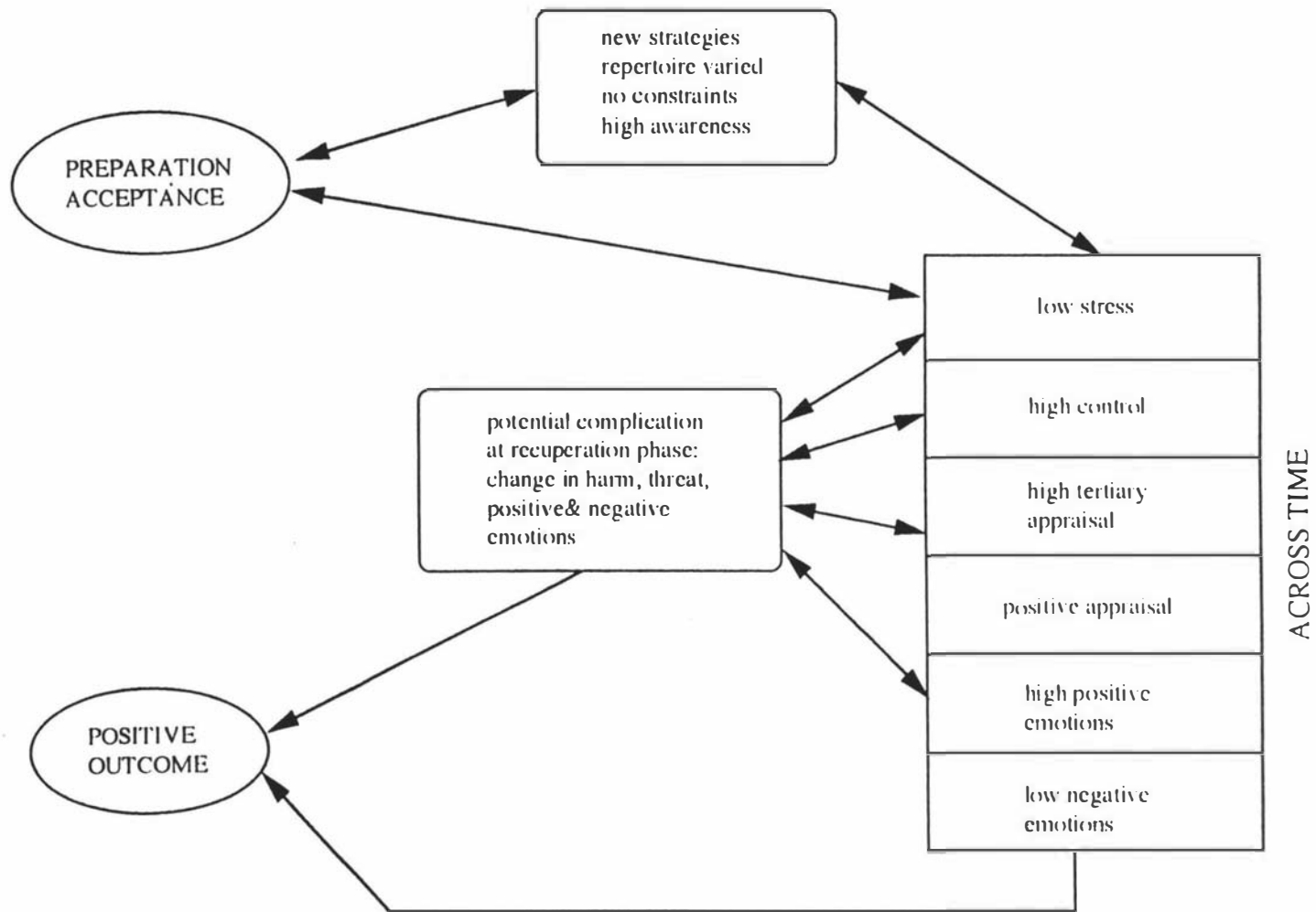
FIGURE 21: Summary of the coping process for Mrs L showing a reciprocal flow between the constructs

her complications were "just to be expected," and that she "probably expected too much, I thought I would be really new again .... I'm at a standstill until the pills run out. I've just got the feeling that it's all to do with the pills. It is better but not what I thought it would be."

She described the way she usually deals with stress as "it depends on what it is, this one's pretty tough," and in response to being asked how she was generally dealing with the anticipation of surgery she commented: "I don't know, I'm doing things mechanically." This lack of awareness and terse response was typical as she had difficulty understanding some of the questions and articulating some responses. After discussion with her it was decided that all data would be collected by interview. Mrs M was the only participant who was still engaged fully in the coping process at the outcome phase.

She was reluctant to have the surgery stating "if I had my way I would stay put here," and she maintained a generally negative appraisal throughout the coping process by dwelling on a past experience and this was particularly prevalent at the first interview when she made several comments at different times: "I think it's taking me back 28 years when I had such a horror, it's going right back over time, I'm quite mutilated there" ...... "It's the way I'm having it done, I've been through a really bad patch in that area, just the thought of having something done" .... "It's not exactly what I'm about to go through, it's unfair, it's all been brought on by what I went through, I'm terrified the same thing will happen, the same feelings will be there" ..... "One doctor makes a big mistake and you wonder if somebody else can too." At the hospitalisation phase this negative appraisal was still present: "I tell you the thought that did go through my mind a lot, I don't know whether I told you last time but I felt like a sheep, you know, bit of meat going through the chainline. That were my thoughts, like a bit of meat, didn't make me feel terribly good." Clearly this specific thought had been with her from the beginning and appeared to be indicative of how her coping process would proceed. However, she did make several positive comments about her progress: "I think I'm doing pretty good" ..... "I feel I've been coping pretty well," and at the outcome phase she considered in retrospect that "I think I coped pretty well. Don't know what contributed to that, my husband I suppose." This last comment suggests that while she had an ability to perceive her coping behaviour as positive and effective she had difficulty in assessing her specific reasons and this lack of awareness plus her negative appraisal appear to be the main factors in her coping process.

Her negative appraisal was matched by a high level of perceived stress most of the time, and the nature of the stress altered over time. At the presurgery phase it was the memory of the previous surgery that she was finding stressful and at the hospitalisation

phase it was the current surgery. especially the night before "just the way I felt, wondering what it was going to be like." Figure 22 shows that her quantitative rating decreased markedly at the recuperation phase and she stated that she was more frustrated than stressed at not being able to do things. The recovery phase was her most stressful time as she was in pain and commented "it gives you a few doubts. starting to think has it been worth it?" She still considered that she was under stress at the outcome phase and by now it was because she had lots of questions she wanted answers to and these were "things beyond me."

Figure 22 shows that her generally high level of stress was paralleled by a high perception of threat throughout and the nature of the threat altered over time from a fear of being cut at the presurgery phase to feeling threatened by her vulnerability at the hospitalisation phase. At the recuperation and recovery phases it was worry about the fact that her "waterworks aren't fixed up" and she did not want to have that for the rest of her life as that was one of the reasons the surgery was done. Her level of threat dropped slightly at the outcome phase when she was still threatened by the insecure knowledge of her adequate recovery "I'm hopeful it will come right. But I don't know. Just knowing can make you feel heaps better instead of making me feel as though it's all in the mind."

Her rating of harm was also high at the hospitalisation. recuperation and recovery phases. and it decreased at the outcome phase when she considered there was no perceived harm (see Figure 22). The type of harm Mrs M described was all connected to physical harm to her body and wondering what was causing the slow recovery. At the hospitalisation phase she rated a moderately high perception of loss but was not able to specify the nature, and this was the only time that a sense of loss was an issue for her and was the only primary appraisal that was not prevalent in her process of coping.

The fourth primary appraisal of challenge was also rated high throughout with a decrease at the recovery phase. This was one area where she attempted to maintain some positivity although at the presurgery phase she was not sure what was challenging: "going to have to be done." During the hospitalisation, recuperation and recovery it was a challenge for her to "get up and get over it" and to keep doing more as time went by.

Another way that she maintained a positive approach was to have a relatively high perception of control and the ratings for this corresponded to those for challenge. except a decrease continued through to the outcome phase. Her description of her sense of control suggested her lack of awareness about the specific nature or sense of self-control and she perhaps preferred that decisions were not in her control "it's alright
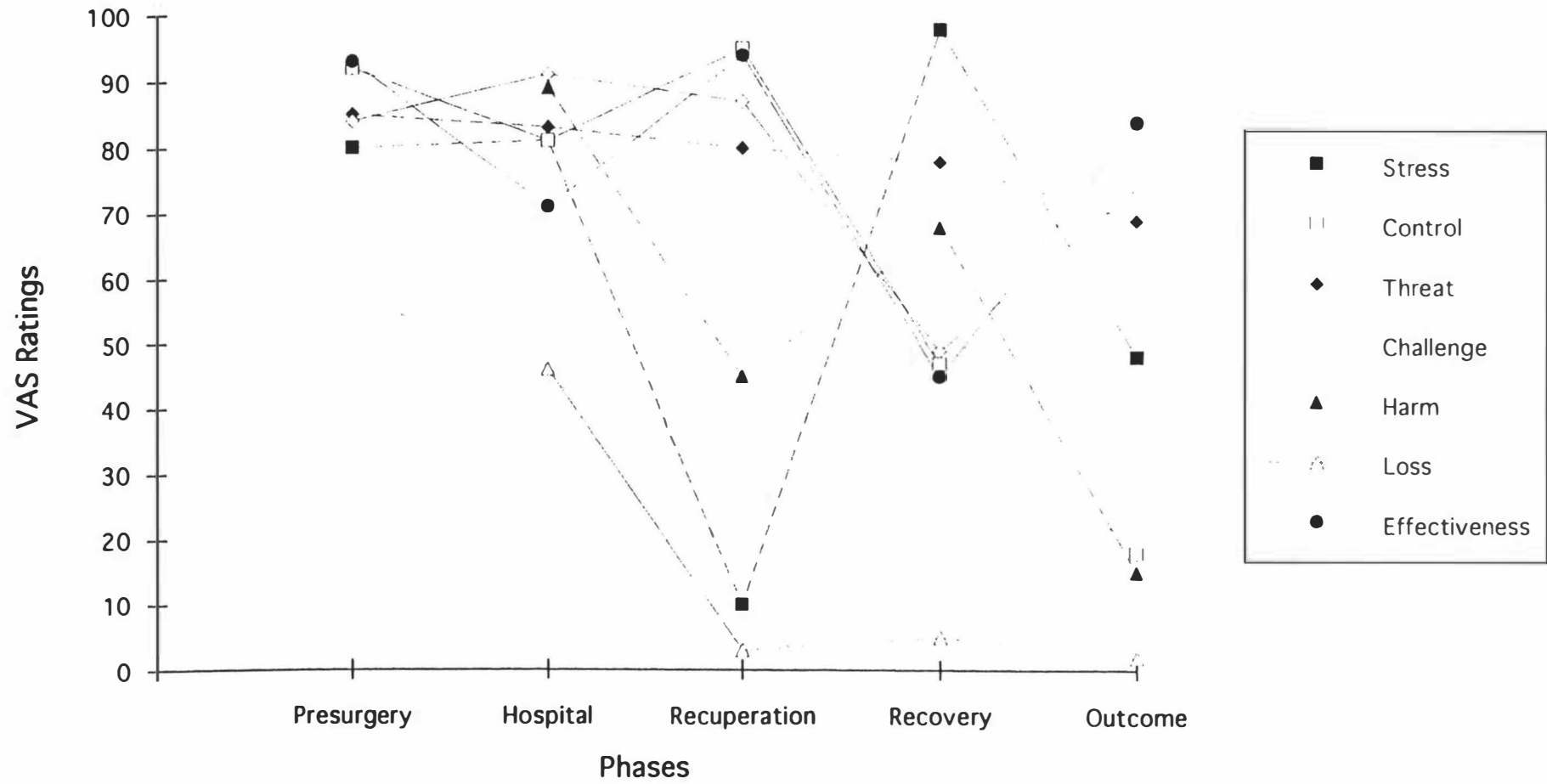
Figure 22: Ratings of appraisal over time for Mrs M

because I didn't have to say yes or no (to the triple surgery), the decision was made and I had to accept it." At the presurgery phase she commented that "I feel as though I have got control. I'm not going to run away from it. I'm going to face up to it." and the hospitalisation phase she stated "a lot of control. I don't know. I don't think I let my feelings show a lot." By the recovery phase she considered that her control was lessening by the doctor's actions: "obviously he wants me to take these tablets. I prefer not to take them but he wants me to. it could be detrimental if I stop them." At the outcome phase her rating was low and she still considered that the doctor's actions were lessening her sense of self-control: "I don't feel as though I have got control. you know how you feel inside. you try to ask, you know what you think is causing it and you are told who are you to question."

Her perception of her doctor's attitude toward her was also a factor in her secondary appraisal process as it created constraints which ultimately appeared to have an impact on her coping behaviour. At the hospitalisation phase she really wanted more information but "thought about it and then just gave it away, I did try but whether I would have followed it through I don't know. The doctor makes you feel inferior, grabbed what you don't mean, so I thought that's it I'll just be ignorant." A similar constraint occurred at the recovery phase when she wanted to ring the doctor but felt that as she had had the surgery she should be recovered and "he might think I'm a pain." Her perception of the medical profession was also a factor when she considered using other strategies and then chose not to use them. For example, at the outcome phase "I wanted to talk to Dr X or my G.P. but they won't listen. I don't like going to doctors." Her lack of confidence in her doctor applied to the gynaecologist only as she stated that her experience with the general surgeon for her carpal tunnel operation was very positive as he provided her with information and "did not make me feel inferior as I had with Dr X." Mrs M had a similar perception of some of the nursing staff when she was in hospital "one nurse was very good, but you want to know things but the answers you get back it's not worth asking. At that time you're feeling so sort of low anyway and you don't want to be pushed away a little further so it's better to be ignorant than to risk that."

These comments on her impression of the medical profession suggest that she had difficulty asserting herself to help her cope with her surgery and this was also evident in her description of her arrival at the hospital: "I didn't like it when I first went in there, I was put in this room and shown there's the radio, TV, toilet and shower and I was left. I was left for a long long time. I couldn't unpack my things, I wasn't told to do that, I wasn't told to do anything, I just sat there, I didn't like that at all. I would have rather stayed away and got there at a later time than to be just put there and dumped - you've

got time to think, you can't do anything." These statements are indicative of a general sense of helplessness and lack of control that pervaded Mrs M's coping process and appeared to impact most on secondary appraisal.

She reported constraints at every phase and also considered using other coping strategies throughout but chose not to use them. She was usually prevented from following through with these because of her lack of confidence. for example. at the outcome phase she wanted to talk to others that had had the same thing done but "I don't know how to go about it. I don't know anyone." The constraint that she placed on herself at the presurgery phase may have prevented her from getting adequate information to prepare herself for the surgery. She wanted to gather some information about her pending surgery but "I didn't press for information and I think it's better that I didn't because I would have been delving right into it ..... I don't know why but I just have this vision, nobody's told me because I don't know anyone who's had it done."

She reported a narrow repertoire at the presurgery phase which may have also reduced her choice of coping strategies as she stated: "I don't know if there's a lot of ways that you can deal with it and I don't like the 'grotties' in life but we're all going to get them." She also reported a narrow repertoire at the hospitalisation phase: "there wouldn't have been anything else;" and the outcome phase, "I'm at a standstill." However at the recuperation and recovery phases she considered that she had a wide repertoire and that she used the best coping strategies that she had and the ones that she knew had worked before. The lack of awareness of her coping behaviour was evident in that she had difficulty distinguishing between the strategies she used habitually and those she used consciously. Mrs M was able to identify only one coping strategy at one phase that she chose consciously.

Her negative appraisal, high threat and stress and secondary appraisal processes appeared to have influenced her tertiary appraisal process. She used perceived ineffective strategies at the presurgery, hospitalisation and recovery phases, and she knew these were ineffective because "what does it do, nothing" .... "I've still got the same feelings, doubts, apprehension, all still there in the mind" ..... "just happens anyway, the pain just stays." However, she did generally perceive the coping strategies that she used as effective. Figure 22 shows that she perceived a decrease in the effectiveness at the hospitalisation phase when she stated that four strategies were effective and three were ineffective. This also corresponds to a slight decrease in control, the highest point for perceived harm and a slight increase in challenge. Mrs M reported another decrease in perceived effectiveness to the lowest point at the recovery phase and this corresponded to a decrease in challenge and control and an increase in

harm and stress. This was when an increase in her pain occurred and she had more perceived ineffective strategies than perceived effective ones.

These decreases in the perceived effectiveness of the coping strategies corresponded to an increase in the number of strategies used to seven, whereas she used four at the presurgery and recuperation phases, and three at the outcome phase. She used two strategies every time: acceptance, although she was a little unsure if this was the case at the outcome phase; and support but she considered that her support came entirely from her husband, with the exception of some nurses at the hospitalisation phase. She used catharsis (crying) three times and found it ineffective each time. She used spiritual comfort twice and found it ineffective once and effective the other time. Mrs M found the most effective strategy at the presurgery phase was diverting attention through keeping busy, at the hospitalisation and recuperation phases it was support from her husband although she considered situation redefinition (thinking positively about the future) was just as effective at the recuperation phase. At the recovery phase she considered that direct action was the only effective strategy and she merely thought about the action and did not carry it out.

Mrs M's emotions during the anticipatory time corresponded to her negative appraisal as she stated at the beginning "I'm very apprehensive." Her negative emotions remained at a relatively high level over time and the nature of them altered as the event unfolded. At the presurgery phase being afraid, agitated, anxious and apprehensive were the most dominant and this was also the case at the hospitalisation phase with the addition of feeling shocked "yes, I'd say extremely." At the recuperation phase she was most agitated, angry and frustrated. She rated her negative emotions highest at the recovery phase and the most prevalent were afraid, angry, annoyed, anxious, apprehensive, shocked and upset. The ratings decreased to the lowest point at the outcome phase but she still considered she was shocked. Her positive emotions were more variable with a sharp increase at the recuperation phase which corresponded to a decrease in the negative emotions, and then a sharp decrease at the recovery phase. She remained high in feeling hopeful throughout suggesting her attempts at a positive perception were matched by one positive emotion.

Summary

The coping process for Mrs M was complex and negative. Figure 23 shows the probable reciprocal flow between the aspects. Her coping process flowed in two directions: from the negative appraisal to the negative aspects; and from the negative appraisal to the more positive attempts at coping. A major influence was her previous traumatic surgery which had occurred 28 years ago and this memory left her feeling
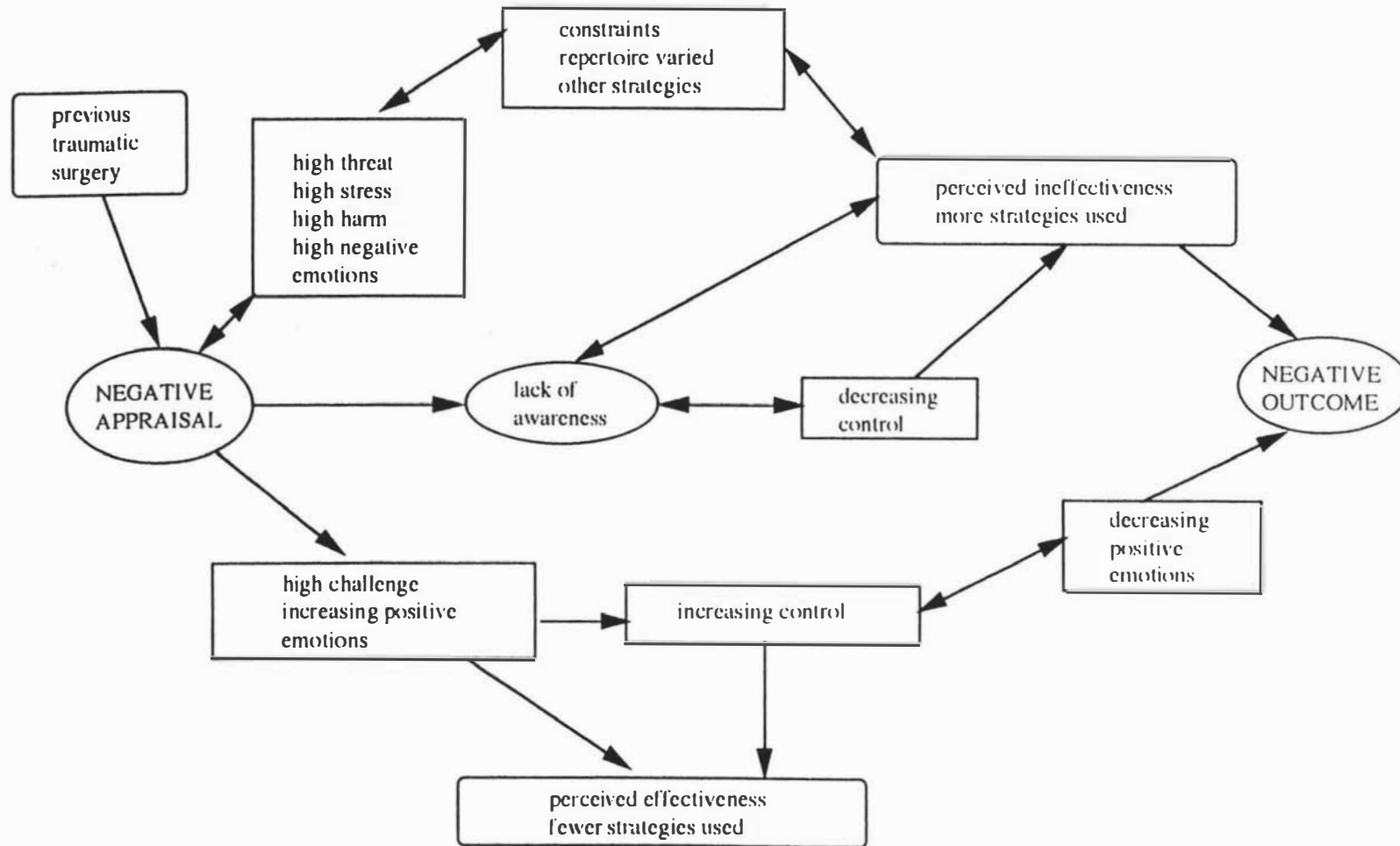
FIGURE 23: Summary of the coping process for Mrs M showing a reciprocal flow between the constructs

very apprehensive and depersonalised and contributed to a negative appraisal of the situation throughout. This negative appraisal contributed to a high level of threat, stress, harm and negative emotions which influenced her secondary appraisal processes. A combination of these processes and evidence of a lack of awareness of her coping behaviour produced perceived ineffectiveness, the use of more coping strategies, which then led to a negative outcome. As well as this process she also was making some attempts at a positive perception of her situation but her negative appraisal may have reduced the impact. This pattern of responses in her coping process may have had a causal rather than a reciprocal flow. She maintained a high perception of challenge most of the time and initially her positive emotions were increasing along with a high perception of control. When this was occurring she had more perceived effectiveness and used fewer coping strategies. However, as her sense of control started to decrease she used more strategies and perceived more ineffective ones and this perception, with her decreasing positive emotions led to a negative outcome.

Much of Mrs M's process of coping was consistent but there were changes at times and these occurred at the recovery phase when her pain increased and she appeared to have begun to lose any hope she had of a quick and full recovery, and she described the last couple of days as "dreadful." At this time, her rating of stress increased to its highest point, her control decreased as she was beginning to feel that she was having to take medication when she didn't want to, and her perception of challenge decreased. Two constraints were present and the number of coping strategies that she used increased, three of these were perceived as ineffective and the rating for effectiveness for the other strategies reduced. She was aware of some confused and unrealistic thoughts and there was a sharp decrease in her positive emotions and an increase in her negative ones. This process suggests that there was an interaction between all the aspects as they all altered.

Mrs M's appraisal processes during the anticipatory stage were extremely negative and continued to be so, and it is more likely that this was a major contribution to her negative outcome and that the ineffective process in between was a major contributing factor. It is presumed that there was an interaction between Mrs M's ineffective coping process and the medical complications but it is difficult to ascertain the direction of the interaction.

CASE STUDY FOUR

Mrs N was a 44 year old clerical worker. Her surgery was a hysterectomy under general anaesthetic and she encountered complications during the hospitalisation and the recovery period. She had a pelvic haematoma and an infection when she left hospital, she haemorrhaged three weeks later, and bleeding continued for another four weeks.

After her post-operative check she stated that she was still very tired and the pain was uncomfortable but she did feel good within herself. She was still needing "to cope a little bit with the way I handle it" at the outcome phase.

She described the way she generally deals with stress in a terse. general manner: "fairly evenly, no problems usually." and this statement suggests that she was not very aware of her coping behaviour and this became evident as she described dealing with her surgery. At the first interview she stated that she was dealing with anticipating the surgery by "ignoring it at the moment." and it became clear that participating in the research had raised her awareness of the situation: "it was funny after you rang this morning I thought I hadn't thought about it very much and it hadn't really worried me very much as I say I was trying to ignore it a little bit but after you rang this morning I was thinking a little bit about the actual surgery .... suddenly as it gets closer I am thinking more about the details of the actual surgery." Her 'ignoring it' can be seen as typical of her negative appraisal in the sense that she was denying the reality and her perception tended to be negative over time but balanced with some positive comments. For example at the hospitalisation phase she described her time in hospital as "I was pleased with the service I got and the relationship between me and the nurses was wonderful. For myself I was apprehensive but prepared to let them take over," and at the outcome phase "the operation was what I expected and so was the after care but the complications were unexpected and frightening."

She summed up her view of her coping process in retrospect at the outcome phase when she stated "at times I coped not very well at all. I felt I was being positive about things but when looking back I possibly wasn't. I was worried about things that I wasn't sure of and I thought too much about myself for three to four weeks and maybe became a little self-centred." This statement suggests that while she was under stress she was unaware of her negativity yet she was coping with the situation in the best way she could. Figure 24 shows the ratings on the visual analogue scales for stress, control, threat, challenge, harm, loss and effectiveness. Her rating of stress, as illustrated on the graph, showed that the most stressful time for her was during hospitalisation when she had one night of "absolute terror" when she had a severe reaction with cramps and chest pain and "they didn't really know what the problem was and that was the worrying part as they couldn't really treat me and the pain just got worse and worse, it was pretty frightening." Her stress was still high at the recuperation phase when she stated "at times the stress has seemed to take over all my thoughts," and then her rating of stress reduced gradually so that by the outcome phase there was little stress.

Her highest levels of threat corresponded to the peaks of stress at the hospitalisation and recuperation phases, with no threat at other times. At the hospitalisation phase it was the
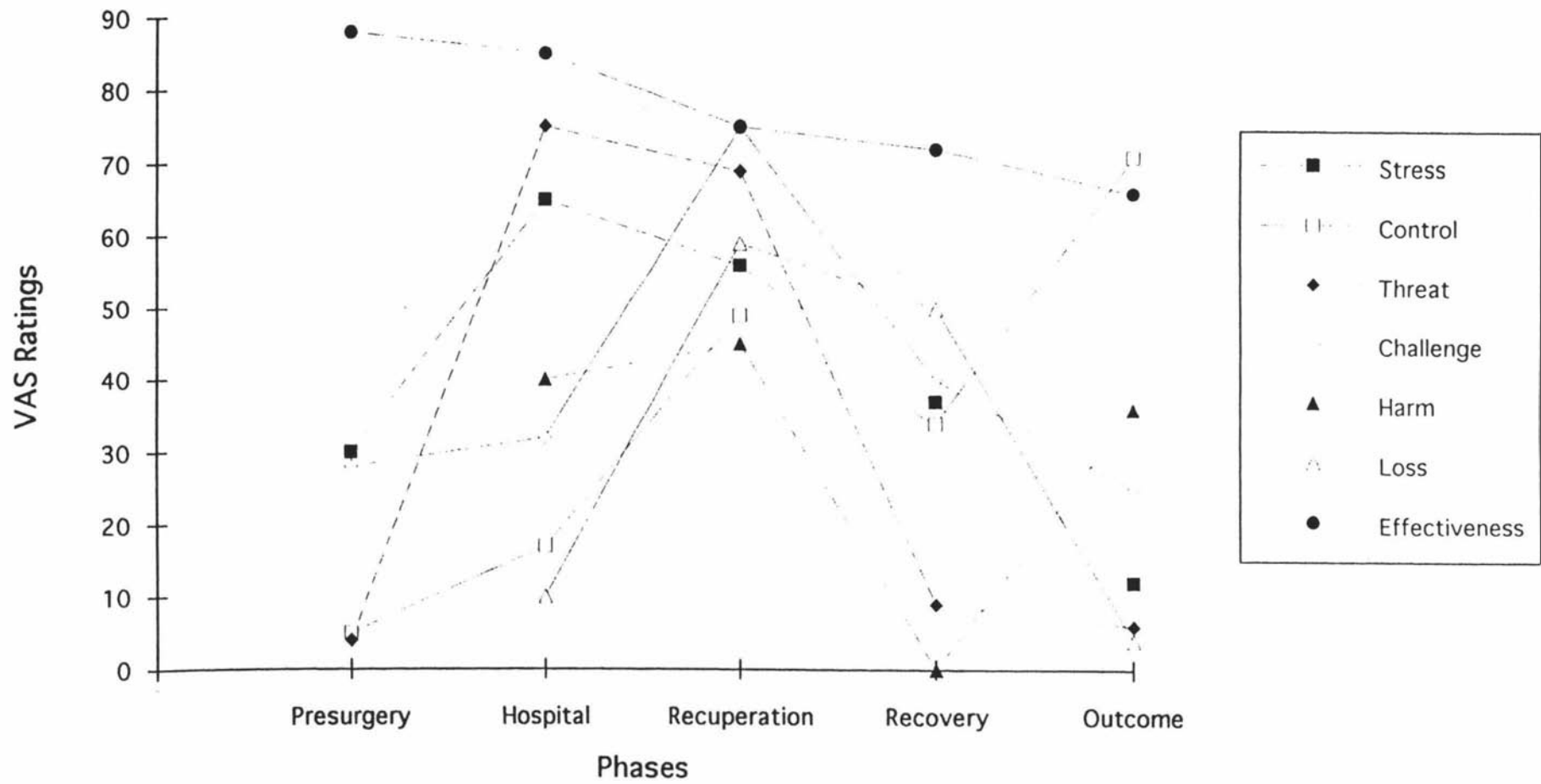
Figure 24: Ratings of appraisal over time for Mrs N

"bad experience" which she had found threatening at the time and at the recuperation phase it was the prospect of further surgery that she found threatening and "having to phone Dr X with my temperature and report on my progress ..... having to have more blood tests, another internal examination and a pelvic scan." Her perception of harm corresponded to her highest levels of stress and threat and at the hospitalisation phase she described the bad experience as harm to her well-being, with an element of threat: "it really put the wind up me and that went on all night long so if I ever have to have another operation it will bring it all back so I must say it has done a lot of harm - it makes me feel dubious." The harm she perceived at the recuperation phase was physical in connection with her complication and still with the threat of further surgery which was pending at that time but which was avoided. She also rated harm as moderately high at the outcome phase and this also had an element of threat as she stated "I'm aware that I could cause physical harm doing something like walking down the stairs." Loss was an issue for her as her complication began to affect her recovery progress and she was found that she was aware of the loss of her usual quality of life.

Her perception of challenge was not very high most of the time and it gradually increased from the anticipation stage to the hospital stage, then increased sharply to the highest point at the recuperation phase then lessened over the recovery and outcome phases. The nature of the challenge was mostly connected to making progress, except at the peak at the recuperation phase when it was "to accept that I had to keep up the antibiotics because of the infection when they presumably were causing the pain and diarrhoea."

Her perception of control had a similar pattern to challenge except at the outcome phase when there was an increase as she considered that she "had got a lot of control over it now." She was able to find a sense of self-control even in a situation where she felt the effects of the surgery were out of her control. For example, at the hospitalisation phase she stated: "I couldn't control what happened to me but I could control the way in which it happened. I just described to the nurses how I felt and they would give me treatment for it," and at the recuperation phase: "I have no control over what is happening to my body but I have some control over the pain killers and deep breathing." The lack of perceived control had an impact on her emotions during the recovery period as "I realised people were doing things for me and I cried when my mother-in-law offered to garden. When you are relying on others you do lose control."

There was little difference between her positive and negative emotions throughout and the peak for both was at the hospitalisation phase. Her negative emotions were slightly higher during the recovery period and the overall pattern was similar to her general primary appraisal pattern.

Her secondary appraisal processes were relatively straightforward. She had no constraints and used three new strategies during her bad experience in the hospital suggesting that when her stress. threat and harm perceptions reached a peak and her sense of control and challenge were not high she had the flexibility to attempt to use different strategies. two of which had been suggested to her by others and the third one she used "because it was there." This flexibility may have had the effect of increasing her repertoire as at the presurgery phase she stated that she had a narrow repertoire as she didn't need any more than what she had used. but after she was introduced to and used the new strategies she stated that her repertoire was wider and she used what came naturally, including the new strategies.

The narrow repertoire at the anticipatory stage corresponded with the one time that she used a perceived ineffective strategy of ignoring the pending surgery and it is possible that the use of this strategy had a major influence on her entire coping process. She found all other coping strategies effective and her perceived effectiveness remained high throughout but did decrease gradually over the recuperation and recovery phases. The strategy that she found the most effective altered over time from seeking information at the presurgery phase, to using relaxation (deep breathing to give her some control over the spasms of pain) at the hospitalisation phase and again at the recuperation phase with the addition of sleeping. At the recovery phase she found relaxation, in the form of resting, the most effective as this helped her to relieve a lot of the discomfort.

She used these strategies of relaxation plus catharsis each time during her hospital and recovery stages. The three coping strategies of acceptance, social support and distraction were used every time, and the nature of distraction altered each time from a cognitive use to an activity. The number of coping strategies that Mrs N used remained stable at six or seven each time and this suggested that she was needing to find a way to manage her complications.

Summary

The coping process for Mrs N was variable and this appeared to be a reaction to her surgery experience worsening rather than improving. Figure 25 shows the probable reciprocal flow throughout her surgery experience. During the anticipation period she appeared unaware of her coping behaviour, described having a narrow repertoire and was the one time she used an ineffective coping strategy. This combined with a negative appraisal to contribute to her having to find new ways of dealing with a bad experience in hospital. She still made positive attempts at coping and these appeared to have had an influence on her secondary appraisal process when she used three new
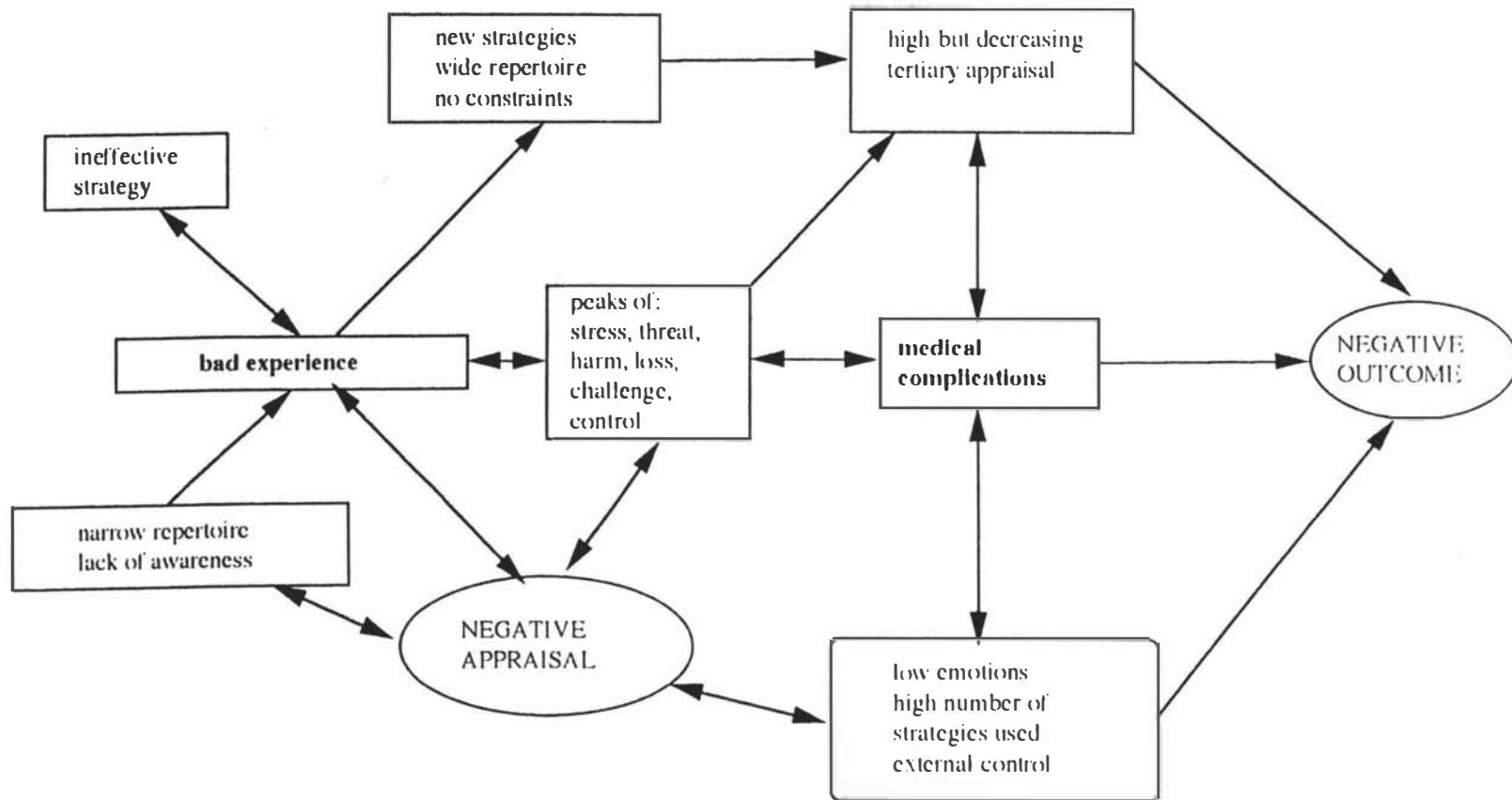
FIGURE 25: *Summary of the coping process for Mrs N showing a reciprocal flow between the constructs and experiences.*

strategies and her repertoire increased for the remainder of the surgery event, plus she had no constraints throughout. This positive secondary appraisal led to a relatively high tertiary appraisal but this did decrease over time and ultimately contributed to a negative outcome. Her appraisal overall was generally negative, and during and after her bad experience there were increases and peaks in her stress, control and primary appraisal. These may have created a reciprocal flow with the continuing medical complications she encountered, which ultimately contributed to a negative outcome. These peaks and the complication would have influenced her decreasing perception of effectiveness. Mrs N's ongoing negative appraisal, along with the experience of the complications would have maintained the consistent responses of her coping process. These responses of low emotions, lack of self-control and the number of coping strategies used also contributed to a negative outcome.

In the anticipation stage she was reluctant to deal with the pending event and chose to ignore it, and it is difficult to know how much influence this may have had on the future complications. It is likely that there was some influence, but to deal with the situation Mrs N appeared to have gained more self-awareness and coping skills during her surgery experience. Some of this may have been due to reactivity from the participation in the research, and some may have been through necessity to find more ways to manage her medical crises.

COMPARISON OF CASE STUDIES

Clearly the coping process for each participant was different as Figures 19, 21, 23 and 25 show, and these diagrams show that the individual participants had some patterns of response that were variable and others that were consistent. For example, in Mrs K's situation her general positive appraisal, wide repertoire, no constraints and consistently high tertiary appraisal processes were consistent, while the number of strategies used decreased, her reactions and perception of stress also decreased, and control increased over time as the surgery event unfolded. In Mrs M's situation it was almost the converse as the consistent responses were her appraisals of threat, challenge, harm and stress, her negative emotions, her general negative appraisal and constraints, which can all be considered negative experiences. Her responses which fluctuated were tertiary appraisal, repertoire, control and positive emotions. This suggests that the outcome may be influenced by the consistency or variability of the coping process and when the consistent pattern was negative these contributed to a negative outcome.

Mrs K's situation presented a very straightforward and uncomplicated coping process and Mrs L's situation was also relatively straightforward and more consistent than Mrs K's process. In contrast, both Mrs M and Mrs N had complicated and more variable

coping processes, partly because while their general process was negative and at times ineffective, they did use efforts to deal with the situation and these had some positive and effective elements. It is possible that the variable responses were the more positive attempts to deal with the situation. It appeared that when there was a positive outcome the coping process was relatively clear and straightforward, and when there was a negative outcome the coping process was more complex.

The major influencing factor(s) were different for each participant. Mrs K's extremely positive appraisal appeared to have been the main influencing factor in her coping process and this was maintained over time. Mrs L also had a positive appraisal but for her this seemed to be the result of her preparation, planning and acceptance prior to surgery. These factors continued to influence the coping process over time. Mrs M's negative appraisal and outcome were influenced by her focusing on her previous traumatic surgery and the apprehension created by this cognition. This continued over the presurgery phase and the hospitalisation phase and probably continued to influence the recovery period. Her lack of awareness also contributed to her ineffective process. The major influence for Mrs N was the use of an ineffective strategy where she chose to ignore the pending surgery and so did little preparation for the event. This is in direct contrast to Mrs L whose planning and preparation contributed to her positive appraisal and outcome. An influencing factor for Mrs K and Mrs M was that they both mentioned previous major surgery with severe consequences. The difference was evident in that Mrs K stated that she had no fear about her pending surgery so presumably she had overcome the past trauma and did not perceive it as affecting her any longer. In contrast, Mrs M was still dwelling on the trauma of her past surgery and this appeared to be a major influencing factor on her negative outcome. The influencing factors were reported for all four women during the anticipation stage so it appears that the initial appraisal process (positive vs negative) and the initial coping strategies used (acceptance and planning vs ignoring it) were a determinant for the coping process and the subjective outcome.

Another difference that was apparent was the choice the participants had over their surgery. Mrs K and Mrs L were very clear that it was their choice to have the surgery and both had thought about it for some time. It was also a choice for Mrs N but she had less time to consider the situation. Although Mrs M had a choice she did not feel that this was the case. It seems that when the women took however long they needed to prepare themselves psychologically, and were clear that they had a choice their process was more positive. It is possible that this choice and preparation time was linked to the perception of control. Mrs K and Mrs L generally had a perception of self-control and

presumably having a choice as well as time for preparation would create a sense of being in control.

Mrs L had a shorter recovery period but this appeared to make little difference to her coping process, it was simply shorter and probably due to the type of surgery as well as her positive experience of coping. Mrs K also had a shorter recovery period which seemed to be the result of an effective coping process. In contrast, the two women with complications had a longer recovery period and their coping process was longer and more complex, which would be expected when medical complications occur. So those who had a positive experience of coping and a positive outcome also had a shorter recovery time. Mrs M and N experienced their coping processes negatively, they had negative subjective outcomes with medical complications, and they had a longer recovery period.

CONCLUSIONS

The use of case studies provided a more detailed analysis of the coping process and this enabled further conclusions to be drawn that were not so evident in the nomothetic data. The first conclusion is that the basis for the coping process appears to be established during the presurgery phase. This was either positive or negative, continued to influence the coping process and ultimately contributed to either a positive or negative subjective outcome. It is probable that previous similar experiences and/or the psychological preparation prior to the presurgery phase contributed to the establishment of the coping process as these provided a predisposition to the positive or negative factors.

Second, the main influencing factors were different for each woman suggesting the individual nature of the coping process. The main influencing factor that was established during the presurgery phase was a coping strategy or an appraisal, or a combination of both. Although it was ascertained that these were major influencing factors they still flowed reciprocally with other aspects at the anticipation phase.

Third, each of the four participants had patterns of responses that were variable and patterns that were consistent. The experiences that were consistent appeared to contribute to the outcome depending on whether they were positive or negative. These consistent patterns appeared to be established at the presurgery phase and were maintained as the women dealt with the surgery event over time. The variability appeared to be the attempts at dealing with the surgery event and these attempts fluctuated as the event unfolded. When the attempts at coping were changing appropriately as the event altered they contributed positively to the coping process and the outcome.

The participants who had a negative outcome still made positive attempts at coping. Although generally their experience of coping was negative there were still continual reappraisals and attempts to deal with the situation. They considered subjectively that they were using the coping strategies effectively and this belief can be considered a positive factor which appeared to be outweighed by the more negative experiences in the coping process.

The use of case studies has illustrated the individual nature of the coping process. The actual pattern of response was identified for each women and more detailed information on the aspects of the coping process was gathered.

CHAPTER TEN:

DISCUSSION

The aim of the present research was to capture the complexity of the coping process by examining it as a multi-faceted, flowing, changing phenomenon. Two types of stressful event were investigated: daily events, which examined single stressful episodes involving short-term stress; and the surgery event which was used to explore the coping process at five phases of a long-term stressful event. This chapter integrates the major findings from both studies, with an emphasis on the surgery study, discusses the results and relates them to the theory and the literature. The main conclusions are presented, then the aspects of the coping process are discussed and the points made in the conclusions are elaborated. The methodological issues are also discussed.

Five main conclusions can be drawn from the two studies. First, there was a continual reciprocal flow which influenced the coping process and determined how a participant coped with a stressful event. The interaction was between the appraisals (stress, control, primary, secondary and general), the coping strategies and the reactions. The crucial factor was the specific combinations of these appraisals and coping strategies. For example, in the daily events study, the coping process in the events that were classified as distinct was influenced by the interaction between high control, low stress and challenge appraisals, a narrow repertoire and a low number of coping strategies. In contrast, the coping process for the events that were classified as ongoing was influenced by the interaction between high stress, low control, threat appraisal and constraints. These different patterns influenced the way coping was experienced and the outcome. In the surgery study, a positive outcome was influenced by a different pattern of responses to that experienced by the participants who had a negative outcome.

The notion of a constant flow is one of the central tenets of the transactional perspective. For example, Lazarus (1984) suggests that the appraisals and coping strategies have the potential to influence each other, and Laux and Vossel (1982) maintain that there is a reciprocal influence rather than a unidirectional influence. The results of the present research supported these notions as no single aspect *in isolation* had any major influence on the coping process. It was the specific patterns of response that influenced the coping processes differently and influenced tertiary appraisal and the outcome. For example, in the distinct events mentioned above, the specific pattern of appraisal and coping strategies contributed to effective coping strategies and resolution of the problem. In the ongoing events the specific appraisals contributed to ineffective coping strategies and lack of resolution of the problem.

Second, there were continual changes over time in the appraisals and coping strategies. These changes were examined over time in two different ways: in the daily events study time was used so that the coping process was able to be mapped in sequence over short-term events; in the surgery study one longer-term event was examined over five phases so that the changes could be monitored. Both these approaches showed that there were always changes that occurred, presumably as attempts to manage the events and alter either the coping process and/or the environment. For example, in the surgery study, the participants who experienced a positive outcome altered their appraisals and coping strategies according to the phase of the surgery so that their attempts at coping were presumably more appropriate for the particular time period. Lazarus and Folkman (1984) maintain that change is an essential element of the coping process and that these changes do not occur indiscriminately but there are patterns that evolve and change among the appraisal processes, the coping strategies and the emotional reactions, whether the event is long-term or short-term. The results of the present research established patterns of change and suggested that the outcome of a stressful event was influenced in several different ways by the dynamic nature of the coping process.

Third, appraisal was more influential than the coping strategies in the changes that occurred. Lazarus and Folkman (1984) view appraisal and coping strategies as equal mediators in the coping process but the results of the present research showed that the influential changing aspect was the combination of the different appraisals. The literature maintains that appraisal and the coping strategies influence each other reciprocally as a stressful event evolves (e.g. Folkman & Lazarus, 1980; Folkman, 1982). Appraisal and the coping strategies did flow reciprocally at times, partly as a result of the fusion between them. However, there was evidence that there was more of a causal flow from appraisal to the coping strategies. When the coping strategies altered it was because of the appraisal. In the daily events study they tended to change if there were perceived ineffective strategies, then a reappraisal occurred and a different strategy was used. In the surgery study the changes in the coping strategies occurred at the different phases of the event, suggesting that as the event unfolded and the pattern of appraisal changed, the coping strategies altered accordingly.

Fourth, some of the patterns of response remained consistent throughout the process of coping, and other patterns varied as the stressful event evolved. The results suggested that the patterns that were consistent were the main contributing factors to either a positive or negative outcome. The patterns that fluctuated were continual attempts at coping with the stressful event, and the effectiveness of these attempts depended on whether the participants' experiences of coping were positive or negative. These results were evident at the group level in the daily events study between the events that were

examined. For example, in the groups of events that were considered to have a negative process of coping, the consistent aspects that were common to all of them were threat appraisal, constraints and ineffective strategies. The remaining aspects varied according to how the participants were attempting to deal with the situation. The patterns that were consistent and those that were variable were also evident in the surgery study. For example, when there was a negative outcome the aspects that remained consistent were specific problems connected to the surgery, external control, the two strategies of acceptance and social support, the ratings of tertiary appraisal and the strategy that was perceived as most effective. The pattern of responses that varied consisted of the general, primary, secondary and stress appraisals, the remaining coping strategies and the emotions, and these were considered continual attempts to deal with the situation.

These results were unexpected and provide some understanding of one of the questions that remains unanswered about coping behaviour: is it consistent or variable (McCrae & Costa, 1986; Peterson, 1989; Stone & Neale, 1984). Most researchers appear to consider that coping is either consistent or variable, and do not investigate both possibilities. Much of the discussion in the literature that centres on consistency refers to characteristics of the person. For example, Folkman, Lazarus, Gruen and DeLongis(1986) suggested that the coping strategies that were consistent in their study were a result of personality characteristics. While there may well be dispositional factors which contribute to coping behaviour, the notion of a coping process focuses on cognitions and behaviours. Other researchers focus on the consistent factors that may influence the coping strategies, rather than the influences on the coping process. Terry (1994) attempted to isolate the consistent factors and found evidence that coping strategies were influenced by the factors that were considered consistent, such as beliefs concerning self-control, self-esteem, low neuroticism and social support. Folkman, Lazarus, Gruen and DeLongis (1986) state that it is a major challenge for researchers to find a way to describe consistency in coping behaviour which includes "the cognitive and behavioural richness of these processes" (p. 578). The present research has (unexpectedly) attempted to meet this challenge and described the patterns which were consistent over time. There were also patterns of the actual thoughts and actions that were reported as variable which appeared to be the actual attempts at dealing with the situation. These findings suggest that when dealing with a specific situation some of the processes of coping behaviour are consistent and some are variable, and future researchers could consider investigating both possibilities.

Fifth, there was a tendency for the participants to experience the coping process as either positive or negative. When the outcome was positive there tended to be an initial positive appraisal, a sense of self-control, low stress appraisal, perceived effective use

of coping strategies and positive emotions. These aspects combined can be considered to constitute coping as a positive process. When the outcome was negative there tended to be an initial negative appraisal, higher stress appraisal, external control, constraints, perceived effective use of coping strategies with some ineffective strategies and negative emotions. This pattern of response characterised coping as a negative process. This difference between the experiences of the coping processes was also an unexpected finding and it does not appear that this is an issue that has been addressed to any large extent in the recent literature. Carver et al. (1993) showed that some coping strategies were related to negative outcomes and others were related to positive outcomes. The present study found similar evidence, except that it was the interaction that occurred in the process of coping, rather than the coping strategies, that influenced the outcome. The results from the daily events study showed that it was the particular pattern of responses that maintained positive or negative influences on the coping process. The results from the surgery study also found different patterns of responses and showed that when coping was experienced positively or negatively this followed through to a positive or negative outcome. This finding is perhaps the most important in the present research as it reveals the patterns that influence the coping process and this is now discussed further, with particular attention to the positive and negative aspects and how these influenced the outcome.

CONSTRUCTS OF THE COPING PROCESS

One of the key findings of both studies in the present research was that the pattern of the reciprocal flow within the process of coping influenced the outcome of a stressful event. Generally, if the process of coping was positive then so was the outcome, and similarly a negative outcome was preceded by a coping process that was experienced negatively. This supports one of the theoretical assumptions of Lazarus and Folkman (1984) who maintain that

> "Regardless of how they are defined or conceptualised, the prime importance of appraisal and coping processes is that they affect adaptational outcomes" (p. 181).

Folkman (1984) considers that the cognitive processes that occur during a stressful event can either change the meaning of the event or reduce the reactions and if neither of these occurs there will be a negative outcome. The findings from the present research support Folkman's view but also show that the pathway through the coping process is more complex as the following discussion shows. Carver & Scheier (1994) state that most of the research focuses on how positive outcomes are prevented and do not often consider how positive outcomes are achieved. The inclusion of outcome in the coping

process meant that what happened from the initial phases of stressful events to the time when there was a reported endpoint could be monitored. Both studies showed that there were several factors that contributed to a positive or negative outcome, and that these contributing factors varied depending on how the patterns of coping experience flowed reciprocally throughout the coping process.

Initial influencing factors

The results from both studies showed that there were influencing factors which were established at the initial phases and these initial influences were usually an appraisal. In the first study, when there was a threat and a challenge appraisal for the same event, if the initial primary appraisal was threat then this negative perception would continue to influence how the participant experienced coping with the situation. Although there was a change to a challenge appraisal later as the participants continued to deal with the situation, the initial perception of threat set up the perceptions of high stress, low control, constraints and perceived ineffective coping strategies. These appraisals and coping strategies continued to influence each other and led to only a partial resolution of the problem.

The different design and more specific focus of the surgery study provided stronger evidence for the influencing factors being established at the initial phase. The results suggested that it was the combination of appraisals at this time which contributed to a negative or positive coping process, influenced the recovery phases of the event, and ultimately the outcome. The initial appraisals appeared to create an expectation about the efficacy of dealing with the event and this continued to influence coping with the entire event.

Sometimes the initial influencing factor was a coping strategy and this raises the issue concerning how and when coping begins, if indeed an exact beginning can ever be determined. Coyne, Aldwin and Lazarus (1981) and Folkman (1982) discuss the ongoing nature of dealing with a stressful event and suggest that the direction of the flow is determined by where the process is entered. If an appraisal occurs first then this is followed by a coping strategy, and if a coping strategy is used first then this is followed by an appraisal. There was evidence of the latter occurring in the daily events study. In the individual events, each time the initial response was a coping strategy this was appraised as ineffective and another strategy was used. It was not until there was a change in thoughts and/or emotions that coping with the stressful event was effective. This does suggest that there was a causal flow, but this was difficult to ascertain at the group level. As Coyne and Lazarus (1980) state, it is necessary to relinquish the idea of

linear concepts and instead to acknowledge the feedback loops and the process-oriented terms.

However, it does seem that the awareness of coping usually begins with an appraisal, but it may also be the automatic use of a coping strategy. The individual cases of both studies showed the processes more clearly and confirmed that the initial influencing factors are important, as what happens at the initial phase of a stressful event is crucial to the remainder of the coping process. Although changes did occur it appears that the expectation created at the beginning continued to influence what happened after that and ultimately influenced the outcome. The initial influencing factor appeared to determine which appraisals, coping strategies and emotions would be involved in either the positive or negative experience of the coping process.

Secondary appraisal

Ray, Lindop and Gibson (1982) suggest that the initial appraisal is followed by an attempt to use coping strategies but the theoretical structure and the results of the present research suggest that the process is not that simple. First there were choices made concerning the coping strategies that would be used and in most cases this secondary appraisal would have followed the initial appraisal. The present research attempted to ascertain some of the factors which influence the choice of coping strategies and one of the most important findings for secondary appraisal was that the participants used coping strategies that were familiar to them. This supports the contention of Carver, Scheier and Weintraub (1989) who suggest that people use familiar strategies over those that are unfamiliar. However, new strategies were chosen when they seemed most appropriate for the situation. For example, in the surgery study several participants used the new strategy of relaxation which was taught to them by the nurses. This strategy can be considered an appropriate way to aid recovery and deal with the consequences of the surgery. This is an example of how the transaction occurs between the environment and the person when a particular coping strategy was helpful to the specific situation. The surgery created the need for relaxation, and the relaxation helped the participants to deal with their recovery.

The use of new strategies also showed there was a conscious selection process as suggested by Edwards (1988), and Endler and Parker (1990). When the participants learned or used a new strategy they stated that they made the choice consciously as they considered the strategies were practical for the situation. In contrast, Coyne and Lazarus (1980) suggest that there is an automatic choice of strategies and the results from both studies showed that when strategies were familiar they were more likely to be used automatically. Clearly then, a consideration in the choice of the coping

strategies to be used was their familiarity. In the daily events study a higher percentage of use of familiar coping strategies contributed to a positive outcome. This suggests that the participants were using the coping strategies which they knew would be effective for the specific stressful event.

Another secondary appraisal aspect which had an influence on how the participants experienced coping was the reported presence of constraints. When these were reported they were more likely to influence the outcome negatively. For example, constraints were a factor in the events that were not resolved in the daily events study. In the surgery study they were a factor for those who had a negative outcome, and the lack of constraints was a consistent factor for those who reported a positive outcome. Constraints influenced the outcome presumably because the participants were not able to use the coping strategies they preferred. The most common type of constraint was situational as suggested by Carver et al. (1989). For example, the participants could not use social support as a coping strategy if nobody was available for them to contact. Roskies and Lazarus (1980), suggest that constraints can be reported even when a person has a highly developed repertoire of coping strategies. The results showed that this was the case in both studies as constraints were reported whether the repertoire was wide or narrow. It was usually the situational or personal limitations which created the constraints. The constraints contributed to a negative outcome and the use of familiar strategies contributed to a positive outcome. The role of these secondary appraisal aspects was to help determine which coping strategies would be used.

Coping strategies

Both studies showed that multiple coping strategies were used. This is consistent with previous research as where checklists are used most participants indicate more than one strategy. The difference with the present research was that the design enabled the patterns of the use of strategies to be examined and to determine how they contributed to the process of coping and influenced the outcome. It did not appear that the coping strategies on their own had any major influence on the outcome. They certainly had a pivotal role and were an integral part of the coping process as without their use coping behaviour would not function in the way the theory suggests. This raises the question as to how useful it is for researchers to continue to focus only on the coping strategies, or the influences on coping strategies as determinants of coping behaviour and outcome.

The results showed that there was both consistency and variability in the use of coping strategies. In the daily events study there was consistent use of the strategies of rational action and emotional response. These were used together in the majority of the events. Rational action is a problem-focused strategy and emotional response is an emotion-

focused strategy. Although this distinction was not a focus of the present investigation, these results support the research which suggests that both these types are used. (e.g. Folkman & Lazarus, 1985; Holroyd and Lazarus, 1982). Rational action addressed the problem, and emotional response addressed the emotional reactions, so these coping strategies can be considered appropriate for daily stressful events.

In the surgery study the strategies of acceptance, social support and relaxation were used consistently and frequently over time. This pattern of usage was consistent with the findings of Carver et al. (1993). One of their main findings was that the use of acceptance was a predictor of "lower distress" in dealing with surgery for breast cancer. They found that when acceptance was not used during the presurgery phase then there was more post-operative stress. The results from the present study differed as all the participants used acceptance in the presurgery phase including those with a negative outcome. However, there were different patterns used between the two groups at the presurgery phase, which suggests that it was the combination of strategies that were used that made a difference to outcome. Social support seems an appropriate strategy to use for dealing with surgery as the participants' ability to be independent was decreased and presumably they needed to rely on other people for support and professional help. Wu and Lam (1993) found that social support correlated with the health of the participants. Auerbach (1992) maintains that social support is an important coping strategy in the time following the stress, and this is supported in the present research. There is evidence that social support reduces the negative impact of the stressful event (Cobb, 1976; Turner & Noh, 1983). This was not necessarily the case in the present research as all the women with a negative outcome used social support at each of the first four phases. However, the negative impact of the surgery may have been greater if social support had not been used. Relaxation can be considered an appropriate strategy for dealing with surgery as it presumably aided the physical healing and provided participants with a way of managing their time when they were not able to continue with their usual daily activities.

Variability in the use of coping strategies occurred as different patterns of strategies were used together and these patterns contributed to either a positive or negative outcome. In the daily events study a different pattern of coping strategies was used for the events that were not resolved. Rational action was not used in these events which suggests that this is a coping strategy which contributes to a positive outcome. The surgery study showed that the pattern of strategies used changed over time and in response to the particular phase of the event. These changes contributed to the different coping processes and the different outcomes for the two groups of participants. There were more fluctuations in the type and use of strategies for those who experienced the

coping process negatively, suggesting that these women were making further attempts to alter a negative situation. These results show that there were different types of strategies that were used consistently for the two studies. Wethington and Kessler (1991) maintain that the types of strategies used to deal with short-term stressful events are different to those used to manage longer-term stressful events. This suggests that different patterns are used in short-term events as a response to the immediate stress, so presumably these were considered the most appropriate ones for the daily events.

The results from the present research showed that the participants usually used more than one strategy at the same time. The coping strategies were not used in isolation from each other but were interactive and simultaneous, and contributed collectively to the coping process and the outcome. Most of the time the participants reported that this combination of strategies contributed to the overall effectiveness and was more helpful than one specific strategy. This complements the findings on the use of multiple strategies and points to the importance of the flow between the coping strategies.

Tertiary appraisal

One of the reasons for separating the use and effectiveness of strategies was to determine whether or not the same strategies that were used most frequently were also those that were perceived as the most effective. Felton et al (1984) maintain that effectiveness may be determined by the use of strategies which are appropriate for the situation. The preceding discussion suggested that the most frequently used strategies were the most appropriate for the events. In the surgery study, two of the coping strategies used most often were also perceived as the most effective. Acceptance did not feature as the most effective strategy, and this may be partly because it is a cognitive strategy and was not as easily identified or described as social support or relaxation. Social support was considered the most effective at the hospitalisation phase, relaxation and social support at the recuperation phase, and relaxation during the recovery phase. This pattern suggests that the most effective strategy altered as the nature of the event changed and the women found those strategies the best at those particular phases. So it was most likely the nature of the phase of the event that determined the effectiveness. The need for social support presumably decreased as the women regained their ability to continue their daily life more independently, then relaxation was perceived as more effective. This pattern was evident whether the outcome was positive or negative, but one difference was that the most effective strategy was more variable when there was a positive outcome. This suggests that the main contribution of tertiary appraisal to a positive outcome was flexibility in the strategy that was perceived as most effective, rather than the effectiveness of the

strategy itself. These women were perhaps able to alter their coping behaviour according to the phase of the surgery event.

Lazarus and Folkman (1984) maintain that it is necessary to explore the possibility that strategies can be effective or ineffective, depending on the person or the situation. In the present research most of the information surrounding ineffective strategies was gathered in the daily events study. It was found that when ineffective strategies were perceived reappraisal occurred. Cameron and Meichenbaum (1982) contend that effective coping interacts with appraisal as the event unfolds and the data surrounding ineffective strategies showed that this was the case in the daily events study. Menaghan (1983) suggests three possibilities for what happens when a strategy is perceived as effective. The daily events study showed that these three possibilities occurred to varying degrees. The most frequent process that occurred was to evaluate the strategies, find them ineffective, cognitively reappraise, then to use a different strategy. There were times when strategies were avoided as the participants knew from previous similar experience that they would not be effective. The only time a perceived ineffective strategy continued to be used was in the ongoing events when nothing had been found to be effective previously. Ineffective strategies were linked to a negative coping process in both studies. In the daily events study the strategies were more likely to be perceived as ineffective when there was a threat/challenge appraisal, the events were not resolved and in ongoing events. In the surgery study those with a negative outcome were more likely to report perceived ineffective strategies. This suggests that ineffective strategies influenced a negative outcome as they did not alter the negative situation in any way.

In the surgery study there was little difference in the ratings of tertiary appraisal for the women with positive and negative outcomes despite clear differences in the ratings of other appraisals. The ratings altered a little but were generally high throughout and there was little variability in comparison with other appraisals. Those with a negative outcome still considered subjectively that their use of coping strategies was just as effective as those who had a positive outcome. It seems that those who experienced coping negatively firmly believed they were coping effectively which suggests there may have been an element of self-efficacy. Bandura (1977) maintains that "the strength of people's convictions in their own effectiveness is likely to affect whether they will even try to cope with given situations" (p. 193). Perhaps the self-efficacy was necessary for the women with a negative outcome so that they at least made attempts to deal with their surgery. Despite the participants' belief in their ability to deal with the surgery event the negative influences within the coping process outweighed this positive perception and contributed to the outcome. O'Leary (1985) examined several articles relating to self-efficacy and health and found that belief in ability to deal with different

types of health problems was an important determinant of how people coped with specific health issues. The results of the present research suggest that the influencing factors for dealing with recovery from surgery were more complex. It seems that self-efficacy alone did not influence the outcome as there was little difference between those who had a negative outcome and those who had a positive outcome in the belief that they were coping effectively. It would be useful to assess self-efficacy more specifically as part of the coping process.

There appears to be a link between the rating of tertiary appraisal and the ratings of challenge appraisal. An unanticipated result in the surgery study was that the rating of challenge was higher at all phases for the women with a negative outcome. This suggests that these women wanted to perceive their experience of surgery in a positive light as well as believe they were coping effectively. An important point is that although some participants were experiencing their coping process negatively they were still making positive attempts to cope with the stressful event. These positive efforts probably reduced the negative effects and can be considered effective coping from that view. As Matheny et al. (1985) suggest, effective coping consists of changing the meaning of the stressful event and adapting so that the least damage is created. Those with medical complications may not have been able to eliminate stress to the same extent as those without complications, but they could attempt to adapt to the situation.

It seems possible that the high and relatively consistent ratings of tertiary appraisal in the surgery study were influenced differently by the other appraisals, depending on whether the outcome was positive or negative. Those with a positive outcome had lower ratings for the perceptions of stress, control, threat, challenge, harm and loss. It appears that the way these appraisals interacted with the consistent aspects of the pattern of coping strategies, the high positive emotions and low negative emotions contributed to a positive outcome. The ratings of all the appraisals were higher for those with a negative outcome, including the more positive appraisal of challenge, which suggests that these women attempted to increase their perception of challenge in an effort to counteract the negative effects. Silver and Wortman (1980) found that when individuals were able to maintain a positive perception in a situation that was negative then their reaction to stress was reduced. This may have been the case for those with a negative outcome. Perhaps the positive perceptions acted as a buffer to what may have otherwise been an even more negative and distressing experience of coping with surgery.

Primary appraisal

Challenge was the primary appraisal that was reported most frequently by the women in both groups in the surgery study and those with a negative outcome reported the nature

of the challenge more intensely, suggesting their need to believe that everything was satisfactory and that they had a positive perception. The results of the surgery study showed that in longer-term stress all the specific primary appraisals were more meaningful for those with a negative outcome, and were barely a factor for those with a positive outcome. In contrast, the results of the daily events study found that primary appraisal influenced the coping process positively or negatively in the short-term stressful situations.

Lazarus and Folkman (1984) are specific about the primary appraisals that occur within the coping process and the results from the present research suggested that the specific primary appraisals were more influential in the outcome of dealing with daily stressors. The challenge appraisal had more effect on a positive outcome in the daily events study, as suggested by Holroyd and Lazarus (1982) and Lazarus and Folkman (1984). However, this was not the case in the surgery study.

Previous literature discusses the importance of distinguishing between the primary appraisals (Coyne & Lazarus, 1980; Lazarus, 1982). The results of the present research suggest that this distinction was not as important as the theory implies. Although there was evidence in the daily events study that primary appraisals influenced the outcome, it was the interactive processes that occurred with other appraisals and the coping strategies that were the contributing factors. In the surgery study the distinctions were more meaningful for those with a negative outcome. The separation of harm and loss into two appraisals suggested that there were some differences between these two appraisals, but again none of the primary appraisals in isolation were major influencing factors.

Lazarus and Folkman (1984) also suggested that the primary appraisal can alter as a stressful event evolves and there was evidence that this change occurred. In the daily events where both threat and challenge were reported it was clear that once coping strategies were used and cognitive changes occurred then the event was perceived as challenging rather than threatening. However, it was the reciprocal influence from other aspects that contributed to the outcome. Although primary appraisal was not so prevalent in the surgery study the results showed that the ratings and nature of the primary appraisals altered from phase to phase and contributed to the positive or negative nature of the coping process.

Control

One of the important contributing factors to the outcome of a stressful event is the manner in which the appraisals flow reciprocally. The one appraisal that differed

noticeably between those with a negative outcome and those with a positive outcome in the surgery study was the perception of control. Those with a negative outcome had a perception of external control for the first four phases, and this consistent aspect appears to have been a major influencing factor in maintaining the negative experience of coping. In contrast, the perception of control was variable for those with a positive outcome and when they had a perception of external control it was when it would have been expected: during the hospitalisation and recuperation phases when their ability to function at the usual level would have been reduced. Breemhaar and van den Borne (1991) maintain that perceived control influences the way that people cope with the stress involved in the event of surgery. The results from the present research support this notion and show that it was the nature of the control which made the difference, rather than the quantitative rating, and this result also shows the value of including qualitative data. In the daily events study only ratings of control were measured but several participants commented on their perception of control over the situation. The daily events study showed that there was a higher rating of control when there was a positive outcome. The results from both studies suggested that the perception of control was a contributing factor to whether a person experienced coping positively or negatively.

Control is considered by most authors to be an important part of coping behaviour but there is little agreement as to the role it plays. Several authors consider that control has multiple functions (Folkman, 1984; Lefcourt, 1992; Parkes, 1984), and in the present research the focus was specifically on the perception of personal control over the situation. Affleck et al. (1987) suggest that the appraisal of control precedes coping behaviour. The results of the surgery study supported this notion as the initial appraisal of control during the presurgery phase was a major contributing factor to dealing with the remainder of the event. Cozzarelli (1993) suggests that those who have a high perception of control in stressful events will also cope more effectively, use social support and have a wide repertoire of coping strategies. The results of the surgery study showed that this was true of those with a positive outcome with the exception of a wide repertoire. Taylor (1990) maintains that those who have more control over a stressful episode adapt more effectively than those without any feeling of control. The present research found that this was the case and that control was an integral part of the coping process and was a contributing factor to different outcomes. There are two additional considerations. First, it was the nature of the control (self-control versus external control) which made the difference to the outcome, not just a simple perception of control or no control. Second, the contribution that the perception of control made to the coping process was a result of the interaction with other aspects, especially other appraisals.

Appraisal

As already discussed, the process of cognitive appraisal was more influential than the coping strategies. However, cognitions played an even wider role as there were other cognitive factors which contributed to the coping process. The inclusion of questions concerning thought processes elicited information that was an important part of the participants' experiences. This data on the cognitions contributed differently in the two studies. In the daily events study it allowed the process of reappraisal to be determined so that the cognitive changes that occurred in the short-term events could be monitored. It was found that it was the cognitive changes which influenced the defined aspects and, most importantly, kept the coping process flowing until the problem was resolved or there were changes in the emotions which indicated that the situation had been dealt with satisfactorily. In the surgery study the additional data on cognitions allowed more precise information on the influence of the cognitions. For example, in the presurgery phase it was clear that the negative coping process was influenced by the negative ruminations of the women, whereas the positive coping process was influenced by the cognitive coping strategy of situation redefinition where the women considered the pending surgery in a positive light. These results support the contention by Folkman et al. (1979) that a complex set of cognitive processes are activated when a person is faced with dealing with a stressful event. This also highlights the fact that the methodology used traditionally in coping research has not been effective in capturing the complexity of the cognitive processes that has been postulated for several years.

Reactions

The present research highlighted the importance of the cognitive processes. It is considered that emotions interact with the appraisal processes to influence coping behaviour (Folkman & Lazarus, 1985; Lazarus, 1982). The results of the surgery study showed that the emotional, cognitive and physical reactions were a factor in the different outcomes. Those with a negative outcome reported higher ratings for all the reactions. This suggests that either the negative reactions influenced the coping process negatively, or the negative experiences of the coping process had the effect of maintaining the reactions at a higher level.

Lazarus (1977) maintains that emotions change over time as a result of the use of coping strategies. The results of the surgery study showed that the specific emotions that were reported did alter from phase to phase, and these changes were most likely created by the changes in the appraisal of the event. The ratings for those with a positive coping process were more consistent over time, suggesting that these had a stabilising influence.

COPING AS A PROCESS

The transactional perspective maintains that the transaction occurs between the person and the environment and it was clear in the present research that the event made a difference to how the coping process proceeded. In the daily events study the nature of the event interacted with the coping process although it was not possible to determine the direction of the flow. The direction may not be important as it was the experience that was mapped and described in the individual events which showed that there were different coping processes for different types of events. The design of the surgery study made it more possible to ascertain that as the event altered at the different phases the coping process altered to deal with the changes in the event.

When coping is viewed as a process there is inevitable fusion of the constructs so that it is difficult to distinguish between them at times. The results of the present research showed there was often a fusion between appraisal and the coping strategies. This fusion could occur at any point in the coping process and it was sometimes difficult to distinguish when a cognition was a coping strategy and when it was an appraisal, as suggested by Folkman and Lazarus (1985). For example, in the surgery study some of the women who had a positive outcome reported using the coping strategy of situation redefinition during the presurgery phase. They described the use of this strategy as perceiving the pending surgery positively. It was difficult to distinguish this cognitive strategy from appraisals which were positive. The distinction between the appraisals and coping strategies became blurred and to some extent irrelevant. The participants' experiences were able to be mapped, in the case studies, so that the reality of the experience of how people cope was represented as an ongoing, evolving, changing process, rather than as a series of separate variables.

The main influencing factor in the coping process was appraisal which consisted of a complex set of cognitive processes involving a combination of several different appraisals. The way in which these appraisals combined and interacted at the initial phase of a stressful event continued to influence the coping process as the event evolved. The specific combination of appraisals tended to be experienced as either positive or negative throughout the process of coping, and these continually interacted to influence the experience of coping. The appraisals that were involved included a perception of stress, and low stress was associated with a positive outcome and high stress with a negative outcome. This appraisal of stress interacted with a perception of control which was viewed as either self-control or external control. Self-control contributed to a positive outcome, and a perception of external control contributed to a negative outcome. The appraisals of stress and control flowed reciprocally with the primary appraisals of threat, challenge, harm or loss and all of these primary appraisals

were likely to be perceived more intensely by those who experienced a negative outcome. The appraisals of stress, control, threat, challenge, harm and loss, as well as the emotional and cognitive reactions, continued to interact and change as the stressful event evolved.

At some point the process of secondary appraisal occurred, presumably before coping strategies were used. The participants were most likely to choose coping strategies that were familiar to them, particularly if the event had occurred previously. Reported constraints limited the choice of strategies and had an influence on a negative outcome. Several coping strategies were used for each stressful event, or phase of a stressful event, and often several were used at the same time. The specific patterns of coping strategies used interacted with the specific patterns of the appraisals and reactions and contributed to a tertiary appraisal. The strategies that were used the most frequently were also perceived as being the most effective, although it was the combined use of strategies that was considered to contribute the most to the effectiveness. By the time the effectiveness of the coping strategies was evaluated the continual reciprocal flow over time had contributed to changes in the appraisals and the reactions. The need for coping then decreased or ceased, and a positive or a negative outcome was reached. Some patterns of appraisals, coping strategies and reactions in the coping process varied as the event evolved and these were the attempts at coping. There was likely to be more variable attempts when the outcome was negative. Other patterns of response that were established remained consistent throughout the process of coping. These patterns maintained the positive or negative experiences of coping and influenced the outcome. If the experience of coping was positive then the outcome was positive. If the experience of coping was negative, there were still positive attempts to deal with the situation, but these were outweighed by the negative experiences and a negative outcome was reached.

There was a continual reciprocal flow over time between the appraisals, coping strategies and reactions, and the way in which the interaction occurred and the specific patterns of response that were reported in the coping process influenced the outcome. Figure 26 shows a conceptualisation of the process of coping which was developed from the results of the present research.

METHODOLOGICAL ISSUES

Previous literature has theorised about coping as a multi-faceted, dynamic changing process and postulated the importance of the role of cognitive appraisal. The methodology used in previous research has not captured the complexity of the theory of the coping process for several reasons: the focus has been largely on the coping
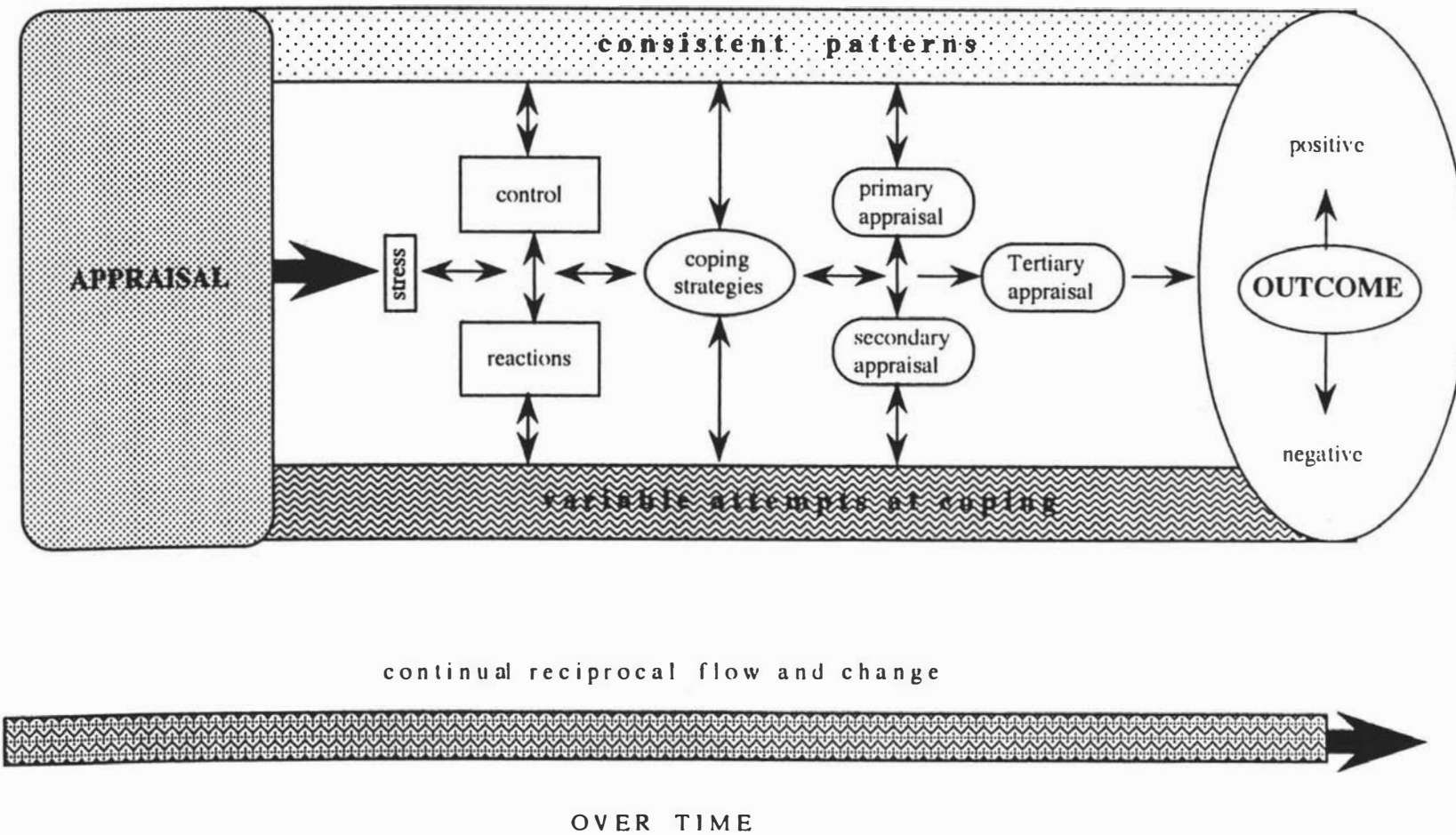
FIGURE 26: Conceptualisation showing how the outcome was influenced by the reciprocal flow of the coping process

strategies only; the nature of the cognitive aspects have not been examined adequately; there has been an insistence on keeping process and outcome separate, therefore the entire coping process has not been examined; there have been few attempts at using repeated measures for the same stressful event so that changes can be monitored; and there has been a reliance on researching at the aggregate quantitative level. The present research used an alternative methodology which attempted to address all these limitations and examined the changing nature of the entire coping process. The results showed that the alternative methodology was viable and provided some understanding of these previously neglected issues.

The alternative methodology involved collecting a combination of qualitative and quantitative data within a structured framework. Palinkas (1985) states that qualitative analyses can be used to confirm the findings from quantitative data so that if similar results are found then stronger conclusions can be drawn. The results of the present research showed that the qualitative data often presented different and additional information. For example, the ratings of control in the surgery study showed that those with a negative outcome had a lower rating at four of the five phases, which, taken on its own, suggests merely that this group considered themselves to have less control. When the qualitative data was examined it was a perception of external control which was associated with lower ratings and a perception of self-control which was associated with higher ratings. This distinction was ascertained by requesting qualitative accounts and provided additional information on an important link in the coping process. On the other hand, the ratings of threat were higher for those with a negative outcome. Alone, this suggests that this group found that the surgery event was more threatening. While this is accurate, the women's accounts showed that there was little difference in what was perceived as threatening, so it could be concluded that the nature of the threat was not an influencing factor in the negative coping process. This shows the value of including both types of analyses in examining the coping process. If the participants' accounts had been omitted then the nature of the coping process would not have been captured. If the ratings had not been included then the changes in the coping process over time would not have been captured in a sensitive manner.

The inclusion of the qualitative data allowed the coping process to be sequenced and mapped in more detail so that the participants' experiences of coping were captured. This method allowed important information to be gathered that would not be possible using only a quantitative approach, and the data showed that the participants' experiences of coping were far richer and more complex than a quantitative measure would show. Some researchers are now focusing more on several aspects within the coping process, rather than the coping strategies alone. For example, Ptacek et al.

(1992), examined daily events using ratings of stress appraisal, control appraisal, the frequency of use and the effectiveness of coping strategies. Participants were also asked to define primary appraisal and to indicate the order in which they used the coping strategies. The statistical results provided useful information concerning the relationships between these aspects but they failed to capture the richness of the experience as there was no qualitative data to provide additional information. Similarly, Carver et al. (1993), examined coping strategies and levels of stress at five phases of surgery for breast cancer, using only quantitative data. They found evidence that there was an interactive effect between these two variables. They maintain that

> "this spiral of influence between distress and coping reactions across the stages of the transaction has never been observed in previous research, at least in part because it is very rare to have as many distinct measurement points as there were in this study." (p. 388).

Their results also provided useful information on the flow between variables over time, but had the researchers included information on their participants' actual experiences the understanding of how people cope would have been enhanced. The present research incorporated some of the same notions as Ptacek et al. and Carver et al., but the inclusion of qualitative accounts meant the coping process was captured in a more comprehensive and realistic manner.

As well as using both qualitative and quantitative data, the complex design of the present research allowed the experience of coping to be examined in several different ways. In the daily events study a cross-sectional approach was used and in the surgery study a longitudinal design was used. These different designs helped to identify some of the differences between coping with short-term events and dealing with a longer term event. Dolan and White (1988) suggest that there needs to be investigations conducted at both the group level and the individual level as these two approaches can ascertain different information on the consistency of coping behaviour. In the present research the data was analysed at the group level and the individual level. These analyses enabled theoretical patterns of coping experience to be developed from the nomothetic data. The idiographic data helped to show how differently people cope with stressful events and the finer-grained analyses enabled the coping process to be examined in more detail so that the flow of the experience was captured in a manner that is not possible with nomothetic data. The theoretical framework was structured so that the experience of coping could be conceptualised. Some of the data analysis was presented at this structural level so that the understanding of the basic theoretical concepts could be enhanced. Other aspects of the data were presented at the process level so that a description that was closer to the reality of the experience of coping could be reached.

The design of the present research facilitated the opportunity to focus on more than how the coping strategies make a difference to coping with stress. The results showed that the emphasis that traditional methodology has placed on coping strategies has captured only part of the picture of what happens when people cope with stressful events. The design allowed the role of the cognitive processes to be assessed by asking the participants what their thoughts were, and it allowed the actual thoughts and behaviours of the entire coping process to be examined. The analysis of temporal patterns allowed changes to be examined so that the dynamic nature could be captured.

The results of the present research showed the importance of measuring the coping process at different phases of a long-term stressful event. If the process of coping is to be monitored over time then repeated measures are necessary. As Carver et al. (1993) state it is unusual to have multiple phases of coping with the same stressful event. More importantly, it is rare for researchers to use an event such as surgery. This event has the advantage of people's lifestyle being disrupted, so dealing with the surgery is more focused and clearer as there are few other problems to interfere. Investigations such as Folkman and Lazarus (1985), and Carver and Scheier (1994), researched coping with the stress of exams over time. Apart from the quantitative aspect, using this type of event cannot provide such a clear picture.

The focus in the present research was on the gathering of information in a different way so that the methodology matched the theory rather than parts of the theory matching the method. However, some issues need to be raised concerning the data. There were limitations in the data in that it was difficult to reduce reactive effects. Erlandson et al (1993) state that "to get to the relevant matters of human activity, the researcher must be involved in that activity. The dangers of bias and reactivity are great: the dangers of being insulated from relevant data are greater" (p. 15). In the present research, particularly in the surgery study, the participants were fully informed of the purpose of the research and the likelihood that they altered their responses is great. For example, it is possible that reactivity contributed to the consistently high ratings of tertiary appraisal as the participants may not have wanted to be seen as coping ineffectively. However, reactivity effects can be seen as advantageous. Hersen and Barlow (1978) suggest that self-observation is a reactive process. The most likely change that occurred when participants monitored their own coping behaviour was that they became more aware of the process they were undergoing. For example, at least half of the participants in the daily events study commented that completing the questionnaire raised their awareness. As one woman stated:

"Filling in the questionnaire it makes you stop and think about the problem and the way it has affected you, the way you have gone about solving it."

While the likelihood of reactivity needs to be acknowledged and accounted for when reporting the data, it can also be seen as an advantage in raising the participants' awareness so that their self-report was enhanced. This reactivity meant that the more aware the participants became of their coping behaviour, the more information they were able to provide and more of their experience of coping was detailed. Fraser, Hotz, Hurtig, Hodges and Moher (1989) suggest that it is has not yet been ascertained how much reactivity effects influence self-report data.

It is possible that the structure and content of the questions created other response effects such as social desirability and demand characteristics, and these may have led to misleading answers being given. There needed to be clearer operational definitions provided for some of the constructs as it is likely that the participants attributed different meanings to the questions. The reliability of the content analysis also needs to be considered. McBurney (1994) states that there are difficulties with the reliability of content analysis, and at least two researchers are needed to code the data. This was not implemented in the present research, so the reliability of the content coding is open to debate.

Marshall and Rossman (1989) discuss the criteria for the soundness of qualitative research and suggest that there are different rationales for the traditional research parameters of reliability, validity, generalisability and objectivity. The notion of reliability suggests that the coping behaviour under study does not change and therefore can be replicated by similar research. This notion does not fit the concept of coping as a dynamic phenomenon. If coping is to be researched as a process then this means acknowledging that reliability, in the rigid sense, is not appropriate as there will be constant changes that cannot be replicated. However, the results of the present study showed that there were consistent patterns which could be subjected to replication. The structured theoretical framework also creates the possibility of replication.

Marshall and Rossman (1989) state that "an in-depth description showing the complexities of variables and interaction will be so embedded with data derived from the setting that it cannot help but be valid" (p. 145). The data for the present research was considered valid within the theoretical framework and the methodological approach as it formed a description of the participants' experiences. However, the internal validity of the data needs to be considered cautiously in light of the possible response effects. The present research is not considered to have external validity. The

results cannot be generalised to other stressful contexts as the events used were specific. However, this deficit is counteracted by the knowledge and understanding gained in how people cope with daily stressful events and surgery.

The present research relied totally on subjective data and there are difficulties involved in self-report data, the main disadvantage being the lack of objectivity, and as Dewe and Guest (1990) state coping may not be a conscious process so self-report data is liable to error, omission and distortion. The present research attempted to overcome this potential limitation by providing an opportunity for the participants to become more aware of their coping behaviour by gradually introducing the questionnaire in the daily events study, adding an interview in the surgery study so the researcher was available to respond to questions, and by using repeated measures in both studies. The comments the participants made concerning their awareness being raised suggest that this gradual uncovering of cognitive processes particularly, reduced potential difficulties with self-report data. Erlandson et al. (1993) suggest that objectivity is an "illusion," even in the physical sciences and that the important factor is the way in which the data can be confirmed. While the reliance on subjective data can be viewed as a limitation, the advantage was that the participants provided an account of their experiences which captured cognitive processes which are so often problematic in some research.

The alternative methodology of the present research was effective in examining the changes in the coping process as the theory has suggested they occur. Future research needs to refine the method and analysis so that the knowledge of the coping process can be more precise and lead to better understanding of how people cope with stressful events. The qualitative aspect could be improved by adding some questions on other theoretical issues, by adding more open-ended questions and including questions which could clarify the role of some of the aspects such as control, which could be measured for its possible multiple functions. The antecedents of the coping process need to be examined as does more of the contextual detail. For example, how other people being involved in a situation affects the coping process. The specific measurement of temporal aspects was useful in the daily events study and these could be refined and re-examined with a focus on a particular type of short-term stressor. The quantitative aspect can be improved by using a larger sample so more sophisticated statistics can be used to ascertain relationships. The value of traditional research needs to be included so that the two approaches work together to examine the coping process.

Previous researchers have structured the theory of coping into constructs and then measured these constructs as if they were separate components. The present research has also structured the theory into constructs but examined them so that the conceptualisation was that of a flowing process. A contribution of the present research

was to have developed a methodology which captured the coping process as it was intended theoretically. The transactional perspective focuses on the changes in the actual cognitions and actions which occur when people deal with a stressful event. If coping is a process then the methodology must reflect this conceptualisation, and researchers need to acknowledge that the reality of the experience of coping is a complex, dynamic, changing and flowing process which has a richness that needs to be captured.

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APPENDIX A

Would you like to be Involved In my study?

My name is Helen Foster and I am asking people if they would be prepared to participate in my Doctoral research. The research looks at how people deal with problems that occur each day. This is something with which we are all familiar, yet research to date has not discovered some of, the basic issues involved. Your participation will mean we can help uncover some of these issues and the knowledge gained will be an important step in understanding the stress process.

As a participant you would be required to fill out a questionnaire for a few minutes each day for a period of sixteen days, plus attend a feedback session at the end of the participation period. I realise this is asking a lot of your time, but I hope that you will gain a much clearer understanding of how you handle everyday problems and that this will be helpful to you in the future.

I will contact you in a day or two and answer any queries you may have and discuss your possible participation. Thank you for considering this and I look forward to speaking with you shortly.

Helen Foster

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FACULTY OF
SOCIAL SCIENCES

—

DEPARTMENT OF
PSYCHOLOGY

I.D. _____

DATE _____

DAILY RECORD

Please answer all the following questions. Where a yes/no answer is asked for, please tick the one that applies. Sometimes you may not have an answer, so please put D.K. (Don't Know), or question may not apply, so please put N.A. (Not Applicable).

. What was the most difficult problem you had to deal with today?

_____

_____

a) Please indicate how stressful it was on the following scale. Place a mark (/) clearly across the line.

Not at all |————————————————————| Very
stressful   stressful

b) How much control did you think you had over the problem?

No control |————————————————————| Full
                                    control

c) How much do you think the problem affected the way you were able to get on and do things?

Did not |————————/————————| Affected
affect me   me a great
at all   deal

2. Think about the way that you viewed the problem at the time you were aware that it was creating stress for you:

	yes	no
a) Was the problem something that had already happened?	☐	☐
b) Did you find it stressful but still got something out of it?	☐	☐
c) Are you having difficulty dealing with it now?	☐	☐
d) Do you think there may be difficulties in the future for yourself or others?	☐	☐

3. Did you notice any physical reactions (e.g. heart beat faster, short of breath) as soon as you were aware of the problem?   yes ☐   no ☐

If yes, what were they? _____

_____

How long do you think they lasted? _____

_____

4. Did you notice any emotional reactions (e.g. felt anxious, angry) as soon as you were aware of the problem?   yes ☐   no ☐

If yes, what were they? _____

_____

How long do you think they lasted? _____

_____

APPENDIX B

5. Did you notice any changes in the way you were thinking about things as soon as you were aware of the problem?

yes □   no □

    If yes, what were they? _____

_____

    How long do you think they lasted? _____

_____

_____

6. Consider whether you used any of the following methods. Please indicate any specific thoughts or actions associated with the method. Answer as many as you like.

yes   no

    a) Analysed the problem, tried to find solutions to it, or took direct action to solve it.

□ □

_____

_____

    b) Sought support from friends, family or professionals.

□ □

_____

_____

    c) Reacted in a negative way such as taking it out on others, becoming irritable, or finding excuses.

□ □

_____

_____

    d) Accepted that nothing could be done about the problem.

□ □

_____

_____

    e) Expressed or suppressed emotions in some way.

□ □

_____

_____

    f) Thought about the positive side to the problem.

□ □

_____

_____

    g) Thought about other things or did something to divert attention from the problem.

□ □

_____

_____

h) Refused to admit to the problem or believe it existed.

yes   no

☐   ☐

_____

_____

i) Did something to calm down or relax in some way.

☐   ☐

_____

_____

j) Wished that the problem would be gone or that the past could be changed.

☐   ☐

_____

_____

k) Joked about the problem or made light of the situation.

☐   ☐

_____

_____

l) Decided that myself or others were to blame for the problem.

☐   ☐

_____

_____

m) Put my faith in God or looked for spiritual comfort.

☐   ☐

_____

_____

n) Found a new understanding of myself or grew as a person.

☐   ☐

_____

_____

o) Other.

☐   ☐

_____

_____

7. If possible can you place the above methods in the order that you used them. _____

8. You may also have used some of them together. How many of the above methods did you use at the same time? _____
    Which ones were they?_____

9. Were you aware of changing from one method to another?   yes no
    If yes, please describe: _____ ☐ ☐

_____

_____

10. Did you think about which methods you would use?   yes no
    If yes, at what point did you decide which ones you would ☐ ☐
use? _____

_____

11. Did you have a wide range of methods you could use?
    yes ☐   no ☐

Why do you think this is?

_____

_____

_____

Where do you think you learned them?

_____

_____

_____

12. Was there something you would have liked to have used but could not for some reason?

    If yes, what was it? _____

_____

    Why could you not use it? _____

_____

yes   no

☐   ☐

13. Did you find the way that you viewed the problem altered at all at any stage? (e.g. you may have changed from worrying about it to deciding that it may not be so bad after all.

    If so, how did your thoughts change?

_____

_____

_____

yes   no

☐   ☐

14. Has this particular event occurred before?

yes   no

☐   ☐

    If yes, did you use similar methods to deal with it then?

yes   no

☐   ☐

15. Are there any other problems which happened today that you have been concerned about?

    If yes, please describe: _____

_____

_____

yes   no

☐   ☐

16. Are there any problems which have occurred before today but which you were having to deal with today?

    If yes, please describe: _____

_____

_____

yes   no

☐   ☐

17. Please choose one of the above methods that you used. Choose the one that you are most aware of and answer the following questions:

    a) Please state the letter of the method that you have chosen. ___

    b) How long did you use it for overall?

_____

    c) Were you aware of choosing this method?

    yes ☐   no ☐

        Why do you think you used it without thinking about it?

        _____

        _____

    Why did you choose it? _____

_____

    At what point did you choose it? _____

_____

    d) Did you use the one that you wanted to?

        If not, why not? _____

        _____

        _____

yes   no

☐   ☐

    e) At what point did you start using the method?_____

_____

_____

    f) Was the method one that you had used before?

    yes ☐   no ☐

        What made you think of using it?

        _____

        _____

    Where do you think you learned it?

_____

_____

g) How long did it take you to decide to use this method? _____

_____

18. Do you think the method you used was effective?

      yes   no

      ☐   ☐

Please indicate how effective it was on the following scale:

Very Ineffective |_____| Very effective

19. How did you know whether or not it was effective?_____

_____

_____

_____

20. At what point did you decide whether or not it was effective?_____

_____

_____

21. How long did you use the method for before you decided whether or not it was effective? _____

_____

22. If you found the method ineffective did you:

Think about the event again?

      yes   no

      ☐   ☐

Choose another method to deal with it?

      yes   no

      ☐   ☐

Use another method without being aware of choosing it?

      yes   no

      ☐   ☐

22a. Think back now to all the methods you used for this problem, and the order in which you used them. You may have found some or all of these effective and/or ineffective.

a) For those you found effective:

How much do you think these methods contributed to the overall effectiveness of dealing with the problem?

_____

_____

Which methods in particular do you think contributed?

_____

b) For those you found ineffective:

Which ones do you think were ineffective?

_____

How do you think you dealt with them? Did you:

Think about the event again?

      yes   no

      ☐   ☐

Choose another method to deal with it?

      yes   no

      ☐   ☐

Use another method without being aware of choosing it?

      yes   no

      ☐   ☐

23. Think about the time between the start of the problem and now:

                                                                    yes   no

    a) Did you notice any changes in your emotions?   ☐   ☐

        If yes, please describe them: _____

        _____

        At what point do you think these changes occurred?_____

        _____

        _____

                                                                           yes   no

    b) Did you notice any changes in your physical reactions?   ☐   ☐

        If yes, please describe them: _____

        _____

        At what point do you think these changes occurred?_____

        _____

        _____

                                                                           yes   no

    c) Did you notice any changes in the way you thought about   ☐   ☐
things?

        If yes, please describe them: _____

        _____

        _____

        At what point do you think these changes occurred?_____

        _____

        _____

                                                                  yes   no

24. As you dealt with the problem were you aware of any changes   ☐   ☐
happening such as feeling more tired, sleeping more or less hours,
headaches.

        If yes, please describe: _____

        _____

        _____

        _____

        _____

25. Think about how you went about dealing with the problem once you were aware of it. Please place the following in the order that they occurred:

    1. You thought about how you viewed the problem.

    2. You thought about how you would deal with it.

    3. You immediately did something to deal with it.

    4. You decided whether what you had done was effective.

    a) ____

    b) ____

    c) ____

    d) ____

Please feel free to make any further comments about the problem you were dealing with today, or anything else that has occurred to you as you filled out this questionnaire.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

APPENDIX C

Facsimile

MASSEY
UNIVERSITY

Palmerston North
New Zealand
Telephone (063) 69-099

FACULTY OF
SOCIAL SCIENCES

DEPARTMENT OF
PSYCHOLOGY

INFORMED CONSENT FORM

The study you are about to participate in is concerned with how people deal with everyday problems. The following explains what I, as the researcher, would like you to do, and what you as a participant can expect from me.

What I would like from you

I would like you to fill in two types of questionnaire. The first one will be done at the beginning and will take approximately ten minutes. The second one will be answered every day for sixteen days. This will increase in size on the fourth day and again on the seventh day, and so the time required to fill it out will also increase from approximately five minutes for the first few days to 15 to 20 minutes for the last ten days. I will interview you for approximately an hour at the end of the sixteen days and discuss what is happening for you as you deal with everyday problems.

I would like you to make a commitment to this research for the sixteen day period, but if you find it necessary you are free to withdraw at any time.

What you can expect from me.

As a participant in this research all your responses will be kept confidential. This sheet containing your name will be kept separately and your questionnaires will be identifiable by a number only. As I am interested in how each individual deals with problems I may use your responses in a case study. If this happens I will ensure that you cannot be identified in any way.

I intend to make contact with you several times throughout the research. I will leave you my phone number and I will be happy for you to contact me at any time you if you are having any difficulties.

I HAVE READ THIS INFORMED CONSENT FORM AND I AGREE TO PARTICIPATE IN THIS RESEARCH.

NAME _____

SIGNATURE _____ DATE _____

APPENDIX D

Would you like to be involved in my research?

Thank you for agreeing to have your name forwarded to me. The following provides you with some information concerning the research.

I am asking women, through Dr   , if they would be prepared to participate in my research. The research is being conducted through Massey University and my supervisors are Mr Kerry Chamberlain and Dr John Spicer. The study looks at how women deal with the process of going through the different stages of having an operation. Your participation will mean we can more clearly understand some of the important issues in dealing with the effects of surgery. We hope the knowledge gained will ultimately benefit other people.

I realise that this may be a difficult time for you, particularly as you may have physical discomfort and be unable to carry out some of your normal activities. However, I hope that participation will help you gain a clearer understanding of how you are handling the situation, and that this will be helpful to you during this period and for the future.

As a participant you will be asked to meet with me four times and fill out two questionnaires over a period of approximately eight weeks. All the meetings will be in your own home or any other place convenient to you. At the first three meetings I will interview you to find out how you are dealing with the different stages of your surgery. The first will be before you go into hospital, the second will be shortly after your return home from hospital, and the third at the end of your recovery period. Each of these meetings will take approximately one hour, and with your permission I would like to tape record these interviews. I would also like you to fill in two questionnaires during you recuperation period. These will take approximately 15 to 20 minutes each. I will also meet with you a fourth time to explain the research in more detail and provide you with feedback as to how you dealt with your surgery. All your responses will be kept confidential throughout, and no information concerning your situation will pass between Dr Wilde and myself.

I will contact you shortly, explain the research more fully if necessary, answer any queries you may have and discuss your possible participation. Thank you for considering this and I look forward to speaking with you shortly.

ID:_____ Date of completion:_____

MASSEY
UNIVERSITY

Please answer all the following questions and note the following points:

- Where a yes/no answer is asked for, please tick the one that applies.

- Sometimes you may not have an answer, so please put DK. (Don't Know).

- A question may not apply, so please put NA. (Not Applicable).

Have there been any specific problems connected with your recovery from surgery that have happened or you have been thinking about?

yes ☐   no ☐

Please describe them briefly.

_____
_____
_____
_____

Are there any problems other than your recovery from surgery, that you have been thinking about or dealing with at the same time?

a) yes ☐   no ☐

Please describe them briefly.

_____
_____
_____
_____

For this part of the research I would like you to think about how you are dealing with your recovery from surgery. Think back to what it has been like for you over the previous week. For some questions you may find it helpful to think about a specific incident or to focus on the most extreme reaction that you can recall.

1. What do you think you have been doing over the last week to cope with your recovery from surgery?

2. Please indicate on the following scale how stressful you are finding your recovery:

Please place a mark (/) clearly across the line.

Not
stressful |————————————————| Very
stressful

3. How would you describe this stress?

4. How much control do you think you have over your recovery?

No control |————————————————| Full control

5. How would you describe this sense of control?

6. What reactions to your surgery do you think you have been having during your recovery? Think about any physical reactions, emotional reactions, or reactions which have altered your thinking.

7. a) The following scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to the word. Indicate to what extent you have felt this way during the last week. Use the following scale to record your answers:

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

___ afraid   ___ agitated

___ angry   ___ annoyed

___ anxious   ___ apprehensive

___ confident   ___ depressed

___ eager   ___ embarrassed

___ excited   ___ frustrated

___ guilty   ___ happy

___ hopeful   ___ irritable

___ pleased   ___ relieved

___ shocked   ___ upset

b) Using the same scale, please indicate to what extent you were aware of the following during the last week:

___ You have had difficulty concentrating

___ Your thought have been confused

___ You have been thinking about the same thing over and over again

___ Your thoughts have been unrealistic

___ You have felt pain of some sort

___ You have felt sick or nauseous

___ You have been lacking energy

8. Can you describe how you have perceived your recovery from surgery over the last week?

9. How much have you been worried about the future or felt threatened in anyway over the last week?

a) What was it that you found threatening?

b) Please indicate how threatened you felt over the last week:

Not threatened |————————————————————| Very threatened

10. How challenging have you been finding your recovery?

a) What is that you have found challenging?

b) Please indicate how challenging you have been finding your recovery:

Not challenging |————————————————————| Very challenging

11. How much harm do you think you have been aware of during your recovery in the last week? Think about physical harm to your body, or psychological harm, or harm to your quality of life etc.

a) What was it that you found harmful?

b) Please indicate how harmful your recovery from surgery was for this week:

harmful ├────────────────────────────┤ Very harmful

How much sense of loss were you aware of during the last week? Think about loss of quality of life, loss of your female organs etc.

a) What was the sense of loss that you noticed?

b) Please indicate how much sense of loss there was for you this week:

No loss ├────────────────────────────┤ Very much a loss

13. What coping strategies do you think you used to deal with you recovery from surgery for this week? Think about those that were effective and those that were ineffective.

14. These are some other possible strategies that you may have used. Please indicate which ones you used to deal with your recovery, and state what you actually thought and/or did for each one that you used.

a) Diverted attention away from your recovery and your surgery by thinking about other things or engaging in some activity.

_____
_____

b) Tried to see your recovery in a different light to make it seem more bearable.

_____
_____

c) Thought about some solutions to deal with your recovery, gathered some information about it, or did something to deal with it.

_____
_____

d) Expressed emotions to reduce tension, anxiety or frustration.

_____
_____

e) Accepted that your recovery was taking place and that nothing could be done about it.

_____

_____

f) Sought or found emotional support from friends, loved ones, or professionals.

_____

_____

g) Did something with the explicit intention of relaxing.

_____

_____

h) Sought or found spiritual comfort or support.

_____

_____

ɔr the following questions you may find it helpful to number and briefly rite the strategies that you used on this page so that you can refer to them ısily. eg. 1. support , 2. relaxing. Remember to include any that you may ɪve described in Question 13.

_____

_____

_____

_____

_____

_____

_____

15. a) If possible, can you place the strategies in the order that you used them. (eg. 1, 2, 3)

_____

b) You may also have used some of them together. Which ones did you use at the same time?

_____

16.   Was there something you would liked to have used to deal with your recovery but could not for some reason?

yes ☐   no ☐

↓

What was it?

_____

_____

_____

_____

↓

What prevented you from using it?

_____

_____

_____

_____

Did you have a wide range of strategies you could use to deal with your recovery?

yes ☐   no ☐

↓   ↓

What do you think made you choose the ones that you did?

What do you think limited your choice?

_____
_____
_____

↓

Where do you think you learned them?

_____
_____
_____
_____

18. Were there other strategies that you considered but chose not to use?

yes ☐   no ☐

↓

What were they?

_____
_____
_____
_____

↓

Why did you not choose these strategies?

_____
_____
_____
_____

19. Which strategies did you use automatically?

20. Which strategies did you think about before you used them?

21. Were there any strategies which you had never used before?

yes ☐   no ☐

↓

Which ones?

_____
_____
_____
_____

↓

What made you think of
using them this time?

_____
_____
_____
_____

22. Think back now to all the strategies you used. You may have found these effective and/or ineffective.

a) Which strategies did you find ineffective?

b) Please indicate how ineffective they were on the following scale:

Very
ineffective ├───────────────────────────────┤ Very
                                                effective

c) How did you know that they were ineffective?

d) Which strategy did you find the most ineffective?

23. a) Which strategies did you find <u>effective</u>?

b) Please indicate how effective they were on the following scale:

Very
ineffective ├─────────────────────────────────┤ Very
effective

c) How did you know that they were effective?

d) Which strategy did you find the most effective?

e) How much more effective do you think a combination of strategies was compared to the most effective strategy?

Please feel free to make any further comments about your recovery, or anything else that has occurred to you as you filled out this questionnaire.

_____
_____
_____
_____
_____
_____
_____
_____
_____

APPENDIX F

MASSEY
UNIVERSITY

INFORMATION AND CONSENT FORM

The study in which you are considering participating is concerned with how women deal with the effects of surgery. The following explains what I, as the researcher, would like you to do, and what you, as the participant, can expect from me.

<u>What I would like from you</u>

I would like to interview you three times. The first time will be before you go into hospital when I will ask you how you are dealing with anticipating your operation. The second time will be shortly after your return home from hospital when I will ask you how you dealt with being in hospital. The third time will be after you have had your post-operative check, when I will ask you how you have dealt with your recuperation period. All three interviews will take approximately one hour, and with your permission I would like to tape record these interviews.

During your recuperation I would like you to fill out two questionnaires describing how you are dealing with your recovery. These will take approximately 15 to 20 minutes each.

I will also visit you a fourth time to provide you with feedback about the research and to discuss what has been happening for you as you progressed through to recovery.

Although I would like you to make a commitment to all the requirements of this research, you have the right to refuse to answer any particular question, and to withdraw from the study at any time.

<u>What you can expect from me</u>

As a participant in this research all your responses will be kept confidential. All information gathered from you will be identifiable only by a code number and any records containing your name will be kept separately. No information concerning your situation will pass between Dr   and myself.

The results of the research will be written up and submitted as part of my doctoral thesis. As I am interested in how each individual deals with surgery I may wish to quote some of the responses that you give. If this happens I will ensure that you cannot be identified in any way.

I will not offer you any advice about your physical health. If you encounter any health problems during the study I assume you will take appropriate action, as you would normally.

I will be making contact with you throughout the research. I will leave you my phone number and I will be happy for you to contact me at any time if you are unsure of anything or are having any difficulties.

I HAVE READ THIS CONSENT FORM AND I AGREE TO PARTICIPATE IN THIS RESEARCH.

SIGNATURE: DATE: