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**THE MARITAL RELIATIONSHIP FOLLOWING CORONARY BYPASS SURGERY: THE IMPACT ON THE PATIENT AND THE FAMILY**

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**Abstract:** The primary aim of this project was to assess the effect of coronary bypass graft surgery on certain aspects of the marital relationship and family functioning of patients. An experimental pre- and posttest research design was used. The results indicated that bypass surgery had a negative effect on the patients' marital satisfaction, communication and attitudes towards the division of roles in the marriage and family. Bypass surgery had a further negative influence on the emotional bonding of the patients and their spouses with other members of the family. The patients' adaptability regarding new challenges facing the family was also affected negatively. The patients who were still working also showed a greater decline than the retired patients with regard to some of the measured variables. The coping strategies used most often by the families were the seeking of spiritual support and the reframing of the problem.

**Keywords:** cardiovascular, coronary, graft surgery, marriage, family, coping, adaptability

### **Introduction**

Cardiovascular illnesses are presently one of the primary causes of death in South Africa. In spite of positive physiological outcomes on completion of the operation, coronary bypass graft surgery is viewed as a stressful experience by the patient. Poor psychosocial adaptation and emotional problems often occur in these patients (Gortner, 1992; Redeker, 1992). The diagnosis of an illness in a family member has implications for the entire family (Yates, Bensley, Lalonde, Lewis & Woods, 1995). Family members of patients who have undergone coronary bypass graft surgery are not always prepared for the physical and emotional changes that may arise, or the uncertainty that accompanies the illness (Papadopoulos, 1995). Researchers have only recently displayed an interest in the coping strategies that families apply. Previously the focus was especially on crises and family dysfunction (McKenry & Price, 1994; Olson et al., 1989; Yates et al., 1995). Coronary bypass graft surgery can hold consequences for the patient, marital partner of the patient and the family as a whole. The primary goal of this study was to determine to what extent family functioning and specific aspects of the marital relationship are affected by the surgery. The secondary goal was to determine which coping mechanisms are utilised by families in the two postoperative months in order to adapt to the new family circumstances.

### **Method**

#### **Participants.**

The experimental group (n=48) was obtained by approaching all married patients that had undergone coronary bypass graft surgery in the Panorama Heart Unit in the Western Cape, South Africa during a seven month period. The couples had been married for 32.5 years (SD = 13.08). The control group (n=26) was obtained by approaching all the married patients that had received surgery at two private orthopaedic practices in the Western Cape during a five month period. The couples had been married for 26.7 (SD = 12.9) years. The participants in the experimental and control groups largely resembled one another with regard to socio-demographic information.

#### **Materials**

A biographical questionnaire as well as three other reliable and valid questionnaires were used to evaluate the families during the two measurement opportunities.

The Enriching and Nurturing Relationship Issues, Communication and Happiness (ENRICH) questionnaire was developed for research and clinical use (Olson, Fournier & Druckman, 1985). Only four subscales were used in this study: marital satisfaction, marital communication, satisfaction with the sexual relationship, and equal roles. The Family Crisis Oriented Personal Evaluation Scales (F-COPES) questionnaire was developed to identify effective problem solution and behavioural strategies that are utilized by families experiencing diffi-

cult or problematic situations (Olson et al., 1985). Family functioning was evaluated within the framework of the Circumplex-model by means of the Family Adaptability and Cohesion Evaluation Scale (FACES II) questionnaire (Olson et al., 1989).

#### **Procedure**

Over a period of seven months two heart surgeons at the Panorama Heart Unit in Cape Town, South Africa, identified all patients who had undergone coronary bypass graft surgery and who met the inclusion criteria. A visit took place between four and seven days after the patient had undergone surgery. At this opportunity, the patient was given the first set of questionnaires that had to be completed by the patient, the marital partner and eldest child still living at home. Two months after the coronary bypass graft surgery had taken place, the second set of questionnaires was posted to each family.

The control group (n=26) was identified in two orthopaedic practices over a period of five months. Information concerning the investigation was conveyed to the patients by means of a telephone conversation before they underwent their operations. A set of questionnaires with explanatory instructions was posted to the families. Two months after the patient had undergone orthopaedic surgery, the postmeasurement questionnaires were posted to the participating families.

#### **Results**

The results indicate that coronary bypass graft surgery influenced certain aspects of the marital relationship and family life of the patient. Patients in the experimental group displayed a significant decline in their marital satisfaction, marital communication, their feelings about the division of their marital and family roles, and family cohesion and adaptability, while their marital partners indicated a significant decline in family cohesion. It was further evident that the surgery had a greater influence on working patients than on retired patients.

Only core results are further on reported. The average premeasurement scores of the two groups of patients differed significantly for the variables marital satisfaction, marital communication, feelings about the division of roles, family cohesion and adaptability. For all these variables, the average scores were higher for the experimental group.

There was a significant difference between the average postmeasurement scores for family cohesion of the experimental and control group patients (the experimental group's average postmeasurement score was significantly higher). There was also a significant difference between the average postmeasurement scores of the two groups of marital partners with regard to their feelings about the

division of roles, and the children's average post-measurement scores for family adaptability.

Once the effect of the operation on the family member had been determined, two-directional analyses were done to look for a possible interaction effect between working status (working or retired) and group (experimental or control). There was a significant difference between the average pre- and postmeasurement scores for the experimental and control groups for marital communication, feelings about the division of roles and family adaptability. For family adaptability, a significant difference was also found between the average pre- and postmeasurement scores of the working and the retired groups. The results further indicate a significant interaction between the groups and the working status of the patients with regard to the variables marital satisfaction, marital communication, satisfaction with the sexual relationship and family cohesion.

Two-sample t-tests were done to determine if the patients who had a history of heart problems were affected differently by the coronary surgery than the patients who did not have a history of heart problems. The results indicate that, with regard to marital communication, the difference between the average pre- and postmeasurement scores of the patients who had a history of heart problems differed significantly from the patients who did not have a history of heart problems ( $t = -2.78$ ;  $p = 0.008$ ).

With regard to family coping strategies, post-operatively, the marital partners and children of the experimental group and the patients and marital partners of the control group, indicated that the families made significantly more use of the internal coping strategy – redefinition of the problem, and of the external coping strategy – search for spiritual support.

#### **Discussion**

The results indicated that the coronary bypass graft surgery negatively influenced certain aspects of the marital and family life of the patient. As a result of the impact of the coronary surgery, the patients were less satisfied with certain aspects of their marital relationship and felt that they could not share their emotions and perceptions with their marital partners with the same degree of ease as earlier. They also felt that their marital partners misunderstood them. Two months after the coronary bypass graft surgery, the patients preferred a more traditional division of their marital and family roles. In addition, the coronary operation had a negative effect on the patients' and their marital partners' feelings of emotional bonding with, and affection towards, the other family members. The ability of the patients to adapt to new demands and

challenges that are placed on the families was also influenced negatively.

It was found that the working patients who underwent coronary bypass graft surgery were less satisfied with most aspects of their marital relationship. They felt that they were less able to share their emotions with their marital partners, in comparison with the retired patients who underwent coronary surgery. The working patients who underwent coronary surgery were also less satisfied than all the other patients with the expression of affection within the marital relationship, the discussion of sexual issues with their marital partners, and with their experience of emotional bonding between the family members.

For some reason, possibly as a result of the sudden awareness of their "fragile" physical condition, patients who did not have a history of heart problems differed from patients who had a history of heart problems in their judgement of the influence of the coronary surgery on their marital communication. Patients who did not have a history of heart problems experienced an improvement in their feelings and attitudes about their marital communication, and felt that they could share their perceptions and beliefs with their partners with greater ease. In contrast to this, patients who had a history of heart problems felt that they were less comfortable about sharing their emotions with their partners after the surgery.

In order to manage and revise the effects of the coronary bypass graft surgery during the two months after the operation, families made use of two coping strategies in particular. They trusted their Church and their belief in God, and they viewed the stressful situation in a more rational manner, as something that could be overcome. These findings are understandable in the light of the fact that 79% of the families indicated that they were actively involved in a church group. It was also evident from the results that, in the families where the impact of the coronary surgery was managed with an avoidance reaction and the stressor was viewed as a problem that would sort itself out in due course, the patients were significantly less

satisfied with most aspects of their marital relationship after two months. In contrast to this, if the problem was defined in a more rational and manageable manner, the family's ability to adapt to the new demands and challenges that were placed on it improved.

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