Patients' Experiences of and Perspectives on Phase 1 Cardiac Rehabilitation after Coronary Artery Bypass Graft Surgery

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ABSTRACT

Purpose: This study explored and described patients' experiences and perceptions of phase 1 cardiac rehabilitation (CR) after a coronary artery bypass graft (CABG) at a public hospital in the province of KwaZulu-Natal, South Africa. CR is recognized around the world as an effective means of preventing disability and prolonging life in post-CABG patients. Despite this, participation in CR is low. Furthermore, little is known about patients' perceptions of CR programmes in South Africa. **Method:** We used a descriptive qualitative study design to study nine purposively selected participants (mean age 56 y) who had received only individualized CR post-CABG or individualized CR in combination with group CR exercise. The participants were organized into focus groups of attenders and non-attenders of the group CR exercise classes. The four attenders were all men, and the non-attenders were three men and two women. Interviews were transcribed verbatim and subjected to thematic analysis. **Results:** The three main themes that emerged were communication challenges between health care professionals and patients, the patients' experience of physiotherapy, and their recommendations for service delivery. **Conclusion:** Patients' perceptions of the current delivery of phase 1 CR in this study setting emphasized that improvements need to be made in the areas of patient-centred care, equality of access to programmes, and appropriateness of programme content. The results appear to indicate that patients have a limited awareness of and participation in in-patient and outpatient CR programmes. Research into improving the design of CR programmes in South Africa is required, in consultation with patients and the multidisciplinary health care team.

Key Words: communication; coronary artery bypass; patient compliance; patient preference; cardiac rehabilitation; South Africa.

RÉSUMÉ

Objectif: explorer les perceptions des patients après un pontage aortocoronarien de la phase 1 du programme de réadaptation cardiaque (RC) dans un hôpital public de la province du KwaZulu-Natal en Afrique du Sud. La RC est reconnue dans le monde comme un moyen efficace de prévenir l'invalidité et de prolonger l'espérance de vie des patients ayant subi un pontage aortocoronarien. Or, le taux de participation au programme de RC est faible. De plus, on ne sait pas grand-chose des points de vue des patients sur les programmes de RC en Afrique du Sud. **Méthodologie:** l'étude qualitative et descriptive a été menée auprès de neuf patients choisis expressément (âge moyen : 56 ans) qui avaient participé à un programme de RC individuel seulement après leur pontage aortocoronarien ou à un programme individuel ainsi qu'à des exercices de RC de groupe. Les participants ont été séparés en deux groupes de discussion selon qu'ils avaient participé ou non aux cours de RC de groupe. Les quatre participants aux cours de groupe étaient des hommes, alors que l'autre groupe comptait trois hommes et deux femmes. Les entrevues ont été transcrites textuellement et ont fait l'objet d'analyse thématique. **Résultats:** les trois principaux thèmes dégagés sont les défis de communication entre les professionnels de la santé et les patients, l'expérience des patients en physiothérapie et leurs recommandations concernant la prestation des services. **Conclusion:** les perceptions des patients mettent en relief un besoin d'amélioration en ce qui a trait aux soins axés sur le patient, à l'équité d'accès aux programmes et à la pertinence du contenu. Les résultats donnent à croire que les patients ont une connaissance limitée des programmes de RC offerts à l'hôpital et en milieu ambulatoire et y participent peu. Il faudrait approfondir les recherches en vue d'améliorer la conception des programmes de RC en Afrique du Sud en consultation avec les patients et les équipes de soins multidisciplinaires.

Cardiovascular disease (CVD) is the leading cause of death and disability around the world and, after HIV, accounts for the second-highest number of deaths in South Africa.¹ The World Health Organization² (WHO) has defined CVD as a group of disorders of the heart and blood

vessels that includes coronary artery disease (CAD). CAD accounts for the greatest number of deaths related to CVD. Risk factors for CAD are hypertension, obesity, diabetes, physical inactivity, dyslipidemia, stress, poor diet, and smoking. Smoking, hypertension, obesity, and

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diabetes have been identified as the most prevalent risk factors for CAD among people in sub-Saharan Africa;³ in South Africa, its prevalence is highest among Whites and Indians.⁴ Although CAD has been relatively rare among Black South Africans in the past, urbanization and the adoption of a Western lifestyle have resulted in an increase in the incidence and prevalence of risk factors for CAD. It is hypothesized that by 2030 it will be the leading cause of death and disability in developing countries such as South Africa.¹

Coronary artery bypass graft (CABG) surgery is a standard surgical intervention used to relieve the symptoms of advanced CAD and prolong life.⁵ Cardiac rehabilitation (CR) is indicated for all patients post-CABG and is regarded as an essential element in the continuum of care in post-CABG patients.⁶ CR is defined as “the process by which patients with cardiac disease, in partnership with a multidisciplinary team (MDT) of health professionals, are encouraged and supported to achieve and maintain optimal physical and psychosocial health,”⁷ and it is recognized as an effective means of preventing disability and prolonging life in post-CABG patients.⁸ CR consists of three phases. Phase 1 (the in-patient phase) commences after a change in a patient’s cardiac condition, such as sustaining a myocardial infarction (MI) or undergoing CABG surgery. Physiotherapy interventions, including education and early mobilization, are an integral component of phase 1, and the goals are to rehabilitate patients to achieve functional independence at the time of discharge and to educate them about the best ways to address individual risk factors for CAD. Phase 2 CR consists of structured outpatient exercise programmes, which promote the prevention of secondary disease, and phase 3 is the lifelong maintenance of CR.⁹

CR has been shown to improve patients’ functional independence post-CABG to a significant degree and to prolong the effects of surgical revascularization.¹⁰ Ideally, CR should be multidisciplinary and exercise based,¹¹ informed by the literature guiding the implementation of these programmes. Internationally, participation in CR by eligible patients is very low,¹² despite its proven benefits.¹³ Phase 1 CR is patients’ first exposure to this intervention, and the experience may positively or adversely influence their perception of CR for the subsequent phases. Although phase 1 CR has been regarded as the most important of the three phases, it is a relatively under-researched area,¹⁴ particularly in resource-poor settings such as South Africa.^{15,16} This study explored and described patients’ experiences of and perspectives on phase 1 CR post-CABG. It included patients who had received only individualized CR as well as patients who had received individualized CR and participated in a group CR exercise class.

METHODS

Research design

A descriptive qualitative study design¹⁷ was used to understand the perspectives of phase 1 CR participants who had received only individualized CR and those who had received individualized CR and participated in group CR exercises. This design provided an appropriate platform to explore and report patients’ views. The study drew on the tenets of the naturalistic framework, which describes how people function or respond in dynamic, real-life settings, and aimed to explore patients’ views of the service offered at the point of care so that we could make recommendations to improve rehabilitation practice.^{18,19}

Research setting

The study was conducted at a public hospital in KwaZulu-Natal province, South Africa. The hospital offers CR to all post-CABG patients, and it is the only public hospital in the province that performs CABG surgery. Ethical clearance was obtained from the University of KwaZulu-Natal Biomedical Research Ethics Committee. Permission to use the study site and conduct the study was granted by the institution’s hospital manager and the KwaZulu-Natal Department of Health.

CR programme at the study setting

Phase 1 CR programmes are traditionally conducted as individualized ambulatory or group therapy programmes.⁹ At the hospital used for this study, phase 1 CR is offered as individual physiotherapy sessions involving respiratory care and early mobilization out of bed for the first 3 days post-surgery as well as group rehabilitation in the form of biweekly CR group exercise classes beginning on the 3rd postoperative day. Although guidelines recommend that programmes be multidisciplinary and exercise based,¹¹ the classes in this study setting are conducted only by physiotherapists, with a focus on education and exercise. The classes consist of low- to moderate-intensity, active exercises, such as marching in place and squatting, interspersed with deep-breathing exercises and education relating to exercise guidelines and secondary prevention of CAD. The exercises have been adapted from the literature guiding the implementation of phase 1 CR.²⁰

Study population and sample

The participants in this study were selected on the basis of the results of a cross-sectional survey previously conducted at the study site. The survey investigated participation in phase 1 CR classes by all patients who had undergone CABG between February and July 2014. Of the 87 patients who participated in the survey, only 22 had attended the phase 1 CR classes at least once; 65 patients had never attended. These self-reported rates of

Table 1 Participant Characteristics

Participant code	Phase 1 CR Class Attendance	Gender	Age	Length of Hospital Stay, d	Diagnosis	Comorbidities	Work Status	Operative Procedure
P1	CCNA	Male	53	7	CAD	Hypertension, dyslipidemia	Unemployed	CABG × 2
P2	CCNA	Male	55	7	CAD	Hypertension, diabetes mellitus	Unemployed	CABG × 3
P3	CCNA	Female	46	8	CAD	Diabetes mellitus	Unemployed	CABG × 1
P4	CCNA	Female	58	10	CAD, MI	Diabetes mellitus, hypertension, dyslipidemia	Employed	CABG × 3
P5	CCNA	Male	48	8	CAD, MI	Smoker, dyslipidemia, hypertension	Unemployed	CABG × 3
P6	CCA	Male	65	5	CAD	Hypertension, diabetes mellitus	Unemployed	CABG × 3
P7	CCA	Male	67	10	CAD	Hypertension, diabetes mellitus	Unemployed	CABG × 3
P8	CCA	Male	50	7	CAD, MI	Hypertension, dyslipidemia, smoker	Employed	CABG × 3
P9	CCA	Male	68	9	CAD	Diabetes mellitus, hypertension, dyslipidemia	Retired	CABG × 3

CR = cardiac rehabilitation; CCNA = CR class non-attender; CAD = coronary artery disease; CABG = post-coronary artery bypass graft; MI = myocardial infarction; CCA = CR class attendee.

attendance were checked against the patients' medical charts to verify their actual attendance.

A purposive sample of patients was identified from those who did and did not attend the CR group exercise class. All participants received individualized CR from a physiotherapist in the study setting, but only the attender group participated later in the CR exercise classes (one to two classes per week, depending on their length of stay in hospital). The initial sample consisted of both male and female patients, reflecting all age groups and race groups represented in the study population, and all participants were at least 8 weeks post-CABG, with no cognitive impairment or any other concomitant surgery. Participants were contacted by telephone and invited to participate in the study. Although 12 attenders of the exercise classes were invited to participate, only 4 agreed; 17 patients from the non-attenders group were invited to participate, and 5 agreed.

Data collection

A pilot focus group discussion, guided by an expert in qualitative research methodology, was conducted with a small group of patients to develop appropriate focus group guidelines. These guidelines were then applied to two separate focus groups of the CR exercise classes, one of attenders and one of non-attenders. Both focus groups lasted 45–60 minutes and were held in a private room in the study setting. The participants were encouraged to express their overall views of phase 1 CR, including the factors that had (when appropriate) facilitated their participation in the exercise class. Probing and clarification were used to gain a fuller understanding of the comments made in the interviews. A voice recorder and notebook were used to record patients' verbal responses and nonverbal reactions to questions. Member checking was conducted with participants during the discussions to ensure that we interpreted the narratives accurately and to thereby enhance the trustworthiness of the data.¹⁸

Data analysis

We transcribed, read, and re-read the electronic narratives from the focus group discussions to become familiar with the data. Context and nonverbal cues were noted. We analyzed the data with a moderator, who independently carried out a line-by-line analysis to identify any similarities and differences in the participants' responses. Significant participant quotes and patterns were coded, then summarized into themes by ourselves and the moderator separately. Disparities were debated and discussed until consensus was achieved, and the main themes were finalized. The final themes relating to patients' participation in and perspectives on CR were then arranged into descriptive categories.

RESULTS

Sample characteristics

The group of CR class attenders (CCA) was made up of four men, and the group of CR class non-attenders (CCNA) consisted of three men and two women. The participants were aged 46–68 years, with a mean age of 56 (SD 8.34) years. The length of their hospital stay was 5–10 days, with a mean length of stay of 8 (SD 1.62) days. All participants had CAD, and three had also experienced an MI. Seven of the participants had triple vessel disease, one had double vessel disease, and one had single vessel disease. None of the participants were in cardiac failure. The sample characteristics are shown in Table 1.

Focus group data

The themes and categories that emerged from the focus groups are summarized in Table 2. These themes are discussed next, with illustrative participant quotes, and are related to pertinent evidence when appropriate.

Table 2 Focus Group Themes and Categories

Theme	Categories
Communication challenges	Referral; interactions with the MDT; education
Physiotherapy experience	Perceived benefit; CR exercise class content
Participants' recommendations for service delivery	Patient care; consultation and programme facilitation; information and programme access

MDT = multidisciplinary team; CR = cardiac rehabilitation.

DISCUSSION

Communication challenges

Only four of the nine participants were told about the CR group exercise classes in addition to individual rehabilitation.

The nurse said, "There's a class going on; you must join." I was excited because, ay, you know, rehab is something that helps you to get on with your life quickly. (CCA9)

The five participants in the CCNA group reported being unaware of and uninformed about the CR classes.

We never knew about it. I would have loved to have gone to a class to learn what to do when I got home. (CCNA4)

Inconsistent referral to CR by health care professionals is recognized as one of the main reasons for the poor uptake of these programmes.²¹ Participation in the group exercise CR class was directly influenced by referral to, and awareness of, the programme. Patients who were referred reported that they had attended because they were curious and believed that the class would hasten their recovery and improve functional outcomes. Besides being denied a referral to participate in group exercises, the CCNA group were completely unaware of the existence of this programme. This information deficit in itself translated into a lack of access to an available treatment option. This reality is in direct opposition to the Batho Pele ("People First") principles of consultation, access, and information by which all South African public sector health professionals are expected to abide.²² Patients have a right to full and accurate information and equal access to the services to which they are entitled.²³

In addition, outpatient CR is often poorly used by eligible patients.¹² Barriers to non-attendance in outpatient programmes, such as transportation, work, and family commitments,²⁴ apply only to phase 2 and 3 CR. Health professionals should attempt to maximize participation in phase 1 CR, and use the opportunity to promote improved uptake of subsequent CR phases.¹¹

Referral to phase 2 CR programmes was found to be similarly inconsistent and was again related to poor information sharing between service providers and patients rather than to patients' eligibility for this phase of CR.

Researcher: What follow-up rehabilitation have you been offered as an outpatient?

CCNA5: Nothing... My [district] hospital don't even know what you are talking [about].

The WHO²⁵ has recommended that CR be available and routinely offered to all patients with CAD. However, it is apparent from our study that when outpatient CR was offered, it was presented as an option rather than as a prescription for improved health outcomes.

My base (district) hospital [at the 6-wk postoperative cardiology consult] referred me to Happy Hearts [CR] classes. They tell you if you want to join, join. (CCA9)

Patients need to perceive the value of CR to become interested in it.²⁶ In addition, a physician's endorsement of CR is the single most positive predictor of programme uptake,²⁴ yet not a single participant in this study was made aware of the possibility of follow-up outpatient CR before being discharged from the hospital post-CABG. Outpatient CR should be incorporated into phase 1 discharge planning to avoid a breakdown in communication between primary and secondary lines of care; this situation inevitably affects patients' referral to and participation in CR programmes.²⁶

At the same time, one must consider that the lack of availability of CR programmes¹⁵ may have contributed to poor outpatient referral patterns. There is a real paucity of established CR programmes available to public patients in KwaZulu-Natal, with only three district hospitals offering this service. The two participants who were informed of an outpatient CR programme complained that the facility was in an unsavoury environment and that it was too far away to travel to. Accessibility and transportation to programmes is cited as a challenge by many eligible patients.^{12,15} Alternative CR options such as home-based programmes might address this significant treatment gap.²⁷

Participants expressed varied opinions of the MDT. Researchers have described the hierarchical structure of an MDT as one in which doctors dominate, thus challenging the functional collaboration of the team.²⁸ Many participants vehemently praised the doctors' skill yet conveyed anger, frustration, and intolerance of the nurses' attitudes, particularly those in the study facility's High Care ward. Physiotherapists evoked both positive and negative reactions from participants. Although doctors were praised for their medical excellence, they were regarded as being detached from the patient experience, paying little attention to consultation. The Batho Pele principle of consultation²² requires health professionals to practise patient-centred care: to interact with, listen

to, and learn from their patients. Other principles require health professionals to courteously ascertain the needs of patients and the services that they require and to subsequently facilitate the process of meeting those needs while also assessing the patients' level of satisfaction with the services provided. The focus groups elicited the fact that these principles were not always adhered to, as evidenced by the lack of consultation in the response below.

I'm not sure whether she was a nurse or a physio. . . . I just had an op, and she was drumming on my chest; she laughed, then she went away. I was scared cos, like, what was she doing? (CCNA2)

Physiotherapists were viewed as the main source of information regarding the participants' health condition. Participants also viewed physiotherapists as helping to facilitate their recovery.

She [the physiotherapist] was very strict, and I am glad about that. I learned more about my condition from the physios than from anyone else. (CCNA4)

A possible explanation for this is that, by the very nature of the rehabilitation process, physiotherapists spend considerably more time with patients than do doctors. Physiotherapists should therefore capitalize on this favourable position to educate patients and promote their participation in CR. Evidence has suggested that cardiac patients prefer to obtain their information from physiotherapists.²⁹

Participants expressed feelings of fear, anxiety, and physical and emotional abandonment during their time on the High Care ward.

I renamed the ward "die there." It was terrible. You never saw a nurse. No one to help you. So we [the patients] helped each other. (CCNA4)

The participants' perception of nurses as having a "don't care" attitude contravenes the Batho Pele principle of courtesy. Nurses play a pivotal role in phase 1 CR and are often wholly responsible for CR in this phase.²⁶ Patients' responses regarding rapport with nurses revealed that nurses may not have assumed a noticeably supportive role in providing phase 1 CR at this institution. Although staff shortages and a lack of resources place a strain on nursing responsibilities,²⁸ as South African public servants, health professionals are nevertheless obliged to practise patient-centred care.²²

Patient education in a CR programme has been shown to optimize physical, psychological, and social functioning, and it can enable people with CAD to lead productive and satisfying lives.³⁰ Both participant groups in this study displayed poor knowledge of the meaning, content, and purpose of CR.³¹ Similar results were reported in two separate studies,^{23,24} and patients knew neither what a CR programme was nor why it was important. A lack of education regarding the role of CR resulted in these participants having very limited expectations for rehabilitation.

Researcher: What were your expectations of physiotherapy rehabilitation?

CCNA4: I had no expectations. . . . I never even knew that physio was involved in this.

Knowledge enables patients to be active participants in managing their own health condition,³² and it is the crux of all three phases of CR. Some of the core components of education offered in CR programmes are advice on exercise, diet, smoking, and weight management.³³ Patients' needs after a cardiac event have been described as being oriented to knowing their limits.³⁴ The CCA group showed greater aptitude for recognizing symptoms that should limit exercise activity, such as chest pain and dyspnoea, and demonstrated greater knowledge about the limitations relating to activities of daily living. It is possible that exercise guidelines may have been given more emphasis in the group CR classes than during individual physiotherapy sessions.

Walk as much as you can to the point you are comfortable with it. I was taught that I wasn't allowed to drive a car for 6 weeks. (CCA6)

We weren't told exactly what to do, how far to go, and when to stop. (CCNA5)

Cardiac patients require comprehensive information; this should include how to resume daily life activities and work and what lifestyle changes to make.²⁹ In addition, it has been proposed that patients need information specific to their own disease profile rather than a one-size-fits-all approach.³⁵ Our findings reveal that, instead, the advice the participants received concerning lifestyle changes may have been generic and impersonal.

Researcher: What lifestyle changes were you encouraged to make?

CCA6: Nobody came to me and explained to me that I would need to change my lifestyle and how I needed to change it. All this information I gave to myself off the Internet.

All members of an MDT have a responsibility to educate patients about changing health-related behaviour.²⁶ Health professionals should be mindful of the fact that phase 1 CR is an ideal time to inspire patients to make lifestyle changes because at this time their motivation to prevent the advancement of CVD is very high.³⁶ However, one must consider that the ability to retain information during the acute postoperative period is often poor and focused more on the basic activities of daily living.³⁷ This reality is supported by the following response.

Nobody told me [about lifestyle changes]; it has been 3 months, [and] I can't remember. (CCA8)

The information provided at this stage should be concise and individualized to the patient; it should also include family-based education strategies to lessen the possibility of information being forgotten. Communication challenges affecting patients' participation in CR,

such as non-referral and lack of education and information from service providers, are potentially modifiable. To improve future service, the redress of referral inconsistencies, the adoption of more diverse educational tools, and more mindful engagement with patients and caregivers by all members of the MDT must be considered.

Physiotherapy experience

The CCNA group believed that the group exercise class would have afforded them educational, physical, and psychological benefit. They felt unprepared to function independently in their home environment and suggested that classes would have mitigated this challenge. Furthermore, they lacked information on exercise and precautions regarding rehabilitation programmes. It has been reported that patients feel vulnerable because they have poor knowledge of exercise boundaries,³⁴ something that could reduce patients' willingness to exercise and thereby counteract the goals of CR.

It would have got your circulation going, you would have felt happier, more empowered, equipped for when you left here to go and do it at home. I didn't feel prepared to go home. (CCNA4)

In contrast, the CCA group considered the exercise classes to have given them an understanding of immediate sternal precautions, threatening cardiac symptoms, and breathing exercises. They also reported, however, that the classes were limited in the information they gave and lacked sufficient physical challenge, a finding that has been supported by other studies.^{24,38} It is worth noting that patients who associate low or inappropriate exercise intensity with less benefit may be discouraged from becoming further involved in CR programmes^{32,39} because they fail to attach significance to such exercise.⁴⁰ Patients should be provided protocol-guided explanations regarding optimal exercise intensity at this stage of rehabilitation.

I felt I could have done a lot more. It [the class] could have been longer, it could have had more exercise. The actual breathing exercises were helpful because I continued with that. (CCA6)

Although the CCA group believed that the class did not deliver all they had expected, they reported being confident about returning to exercise activities directly after discharge. CR attendance is said to improve self-confidence and functionality and to decrease anxiety.⁴¹ An improved sense of self-esteem positively affects patients' decision to engage in physical activity.⁴²

I was prepared [to go home]. Saturday I was discharged, Sunday I was on the road walking to Checkers. (CCA7)

The findings of this study suggest that the CCA group did derive additional benefit from attending the class, when compared with the CCNA group. Peer support is

often cited as a facilitator of CR participation,^{24,35,38} and it was also acknowledged as an encouraging aspect of the CR classes in this study. Health care professionals should take advantage of this positive patient perspective on group CR programmes to encourage participation.

I think exercising in a group is much, much better because you can help each other and encourage each other to carry on. (CCA9)

Participants' recommendations for service delivery

Participants expressed varying views of the hospital and provided pertinent suggestions for future programmes.

They have to change their attitudes to patients. (CCNA5)

I think a person needs to sit you down and talk to you—what you will go through, the possibilities. (CCA6)

Please, if the classes could be introduced to every group that goes for the operation, I think it will be more helpful. (CCA9)

Participants recommended a shift to patient-centred care relating to consultation, accurate information, and equal access to treatment options—suggestions that are all reflected in the Batho Pele principles.²² An MDT should collaborate with national and international experts in the field to design working models of care to hasten the implementation of these principles in the health care setting. In addition, these measures should be put in place with the goal of encouraging participation in the poorly used subsequent phases of CR because the choice of participating in an outpatient programme is often influenced by prior in-patient experience.^{23,39}

There are a few limitations to this study. First, although 29 individuals were initially recruited for this study, only 9 participants were able to attend the focus group discussions. This study explored the experience of these 9 participants and is not intended to represent the views of all post-CABG patients receiving phase 1 CR. In addition, the findings might have had more value had it been possible for more participants to attend the focus groups. Finally, the study lacks any perspectives and experiences of female class attenders because no female attenders agreed to participate in the focus groups, and the views of the male attenders cannot be generalized to women.

CONCLUSION

The participants' experiences in phase 1 CR, whether individual CR or combined with group rehabilitation, highlighted different challenges and benefits. A lack of a patient-centred approach to care was very apparent in the participants' responses. Communication barriers between health care workers and patients, including inadequate information provided to patients and poor referral patterns, were among the most significant challenges experienced by both groups of participants. Those in the CCA group viewed themselves as functionally

independent, but those in the CCNA group were less confident of their functional abilities on discharge. Participants in both groups emphasized that the information deficit limited their ability to initiate secondary prevention goals, such as modifying individualized risk factors and participating in subsequent CR phases. This was compounded by a lack of discharge planning by health professionals at the study site.

Participants' recommendations for future programmes were all in keeping with a more patient-centred approach to rehabilitation and patient care at this institution. Directing treatment strategies to focus on the South African Batho Pele principles of consultation, access, and information may successfully enhance future phase 1 CR programmes and participation in outpatient CR programmes. In addition, patients' prior experiences and interactions with health care professionals may strongly influence their decision to participate in future programmes.

We recommend that existing CR programmes be reviewed and involve extensive consultation with patients as well as members of the wider MDT. Future research exploring health care professionals' perspectives on phase 1 CR at this and other institutions could provide more insight into these findings and further enhance the planning and effective delivery of future phase 1 CR programmes.

KEY MESSAGES

What is already known on this topic

Cardiac rehabilitation (CR) programmes have been shown to be beneficial to patients who have undergone coronary artery bypass graft surgery, improving their functional independence and overall health as well as reducing the risk of future cardiac complications. Physiotherapists play a key role in phase 1 CR programmes, conducting both individualized and group therapy sessions. Despite the proven benefits of CR, however, participation in CR programmes around the world remains low. The reasons for this, from the patients' perspective, have not been explored in detail, particularly in the South African context.

What this study adds

This study is the first to explore the perspectives of patients of phase 1 CR in a South African public hospital setting. By including patients who had received a combination of individualized CR and group CR classes as well as those who had received only individualized CR, this study revealed the potential benefits of the CR classes over individualized CR only. The findings add to the existing literature on this topic, providing specific recommendations to physiotherapists and other health professionals involved in the design and implementation of phase 1 CR programmes.

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