OPEN ACCESS

Scientific Letters

Research Article

Cardiovascular rehabilitation: perspectives of patients and healthcare professionals on the implementation of multidisciplinary programs

Ana Veloso [1], Rita Rocha [1], Gerly Macedo [2], Ana Teixeira [3,4,5,*] and Vera Almeida [5,6]

[1] University Institute of Health Sciences, CESPU, CRL, 4585-116 Gandra, Portugal; anam.veloso.martins@gmail.com (AV); ritarocha082001@gmail.com (RR)
[2] Clinical and Health Psychology Unit, Psychiatry and Mental Health Service, Hospital da Senhora da Oliveira, 4835-044 Guimarães, Portugal; gerlymacedo@hospitaldeguimaraes.min-saude.pt
[3] Associate Laboratory i4HB—Institute for Health and Bioeconomy, University Institute of Health Sciences—CESPU, 4585-116 Gandra, Portugal
[4] UCIBIO—Applied Molecular Biosciences Unit, Translational Toxicology Research Laboratory, University Institute of Health Sciences (1H-TOXRUN, IUCS-CESPU), 4585-116 Gandra, Portugal
[5] UCIBIO, REQUIMTE, Laboratory of Pharmaceutical Technology, Faculty of Pharmacy, University of Porto, 4050-313 Porto, Portugal; vera.almeida@iucs.cespu.pt
[6] UNIPRO, Oral Pathology and Rehabilitation Research Unit, University Institute of Health Sciences-CESPU (IUCS-CESPU), 4585-116 Gandra, Portugal

* Corresponding author: ana.teixeira@iucs.cespu.pt

Abstract: Cardiovascular diseases are one of the main causes of global mortality, requiring integrated interventions to promote patient recovery. Cardiovascular rehabilitation is an essential approach that combines multidisciplinary care to improve quality of life and prevent recurrences. This study aims to explore the perceptions of the patients and health professionals about the implementation and effectiveness of the Unidade Local de Saúde do Alto Ave (ULSAA) Cardiovascular Rehabilitation Program (CVRP), identifying barriers and opportunities to improve its effectiveness. A qualitative study with a focus group methodology comprised eight patients and five health professionals. Data were analyzed based on Bardin's content analysis methodology. Participants recognized the importance of the multidisciplinary approach, which promoted significant advances in physical and emotional recovery. However, challenges such as fragmentation of care, ineffective communication, and stigma associated with mental health were highlighted. Family involvement was considered essential, and adherence to the program varied due to factors such as personal motivation and limited understanding of the benefits. CVRP is a valuable intervention but faces some challenges. It is recommended to improve communication, expand psychological support, and invest in resources to strengthen cohesion between areas of activity.

Keywords: cardiovascular rehabilitation; multidisciplinarity; therapeutic adherence; psychological support; patients; healthcare professionals

Received: 16 December 2024; Accepted: 31 March 2025; Published: 04 June 2025

Introduction

Cardiovascular diseases (CVDs) continue to be a major cause of mortality and morbidity in Portugal and worldwide and represent one of the greatest public health challenges in developed countries. According to the World Health Organization and the National Institute of Statistics, CVDs are responsible for a significant proportion of deaths and years of healthy life lost. Factors such as poor diet, sedentary lifestyle, smoking, excessive alcohol consumption, chronic stress, genetics, and environmental conditions have contributed to the increased prevalence of these diseases. This combination of risk factors requires comprehensive strategies to prevent, treat, and rehabilitate cardiovascular patients.

Cardiovascular Rehabilitation (CVR) has emerged as a crucial intervention in the context of patient recovery after acute cardiac events, such as myocardial infarction (MI), cardiac surgery, and heart failure. More than an exclusively physical approach, CVR seeks comprehensive recovery, focusing on improving functional capacity, reducing cardiovascular risk factors, promoting autonomy in daily activities, and improving patients' quality of life. International recommendations emphasize that CVR should include, in addition to physical exercise, education on healthy habits, psychological and social support, and the social and professional reintegration of patients [1,2].

The Cardiovascular Rehabilitation Program (CVRP) of the Unidade Local de Saúde do Alto Ave (ULSAA) has been applied to patients' recovery after cardiac events, in three distinct phases that address specific needs.

Early intervention in the hospital is related to greater patient adherence to the recovery process, leading to improved therapeutic outcomes. The second phase involves a structured rehabilitation program that includes pharmacological treatment, physical exercise, and psychological and nutritional support, ensuring a more sustainable long-term recovery. The third phase of the program, conducted in an outpatient long-term setting, aims to consolidate progress achieved in the previous stages, preventing relapses. Given the interdependence of these phases, it is essential to ensure that patients adopt and maintain healthy behaviors, promoting a gradual and sustainable recovery [3].

Despite the clear and documented benefits in the literature, the effective implementation of these programs faces significant challenges. Low patient adherence is one of the main difficulties. Studies indicate that many patients, especially those with lower health literacy or limited socioeconomic resources, abandon the program before completing it. The Boehm *et al.* study demonstrates some barriers to adherence, such as challenges like transportation, extended travel distances, and work-related conflicts [4]. The devaluation of the cardiac condition, the stigma regarding psychological monitoring, and the lack of adequate family support are also recurring barriers. In addition, the motivation to maintain the new habits acquired during the program tends to decrease over time, resulting in relapses and worse clinical outcomes [5,6].

From the healthcare professionals' point of view, the CVRP's success depends on effective integration between various areas of activity. The multidisciplinary team, composed of cardiologists, physiatrists, nurses, physiotherapists, psychologists, and nutritionists, needs to work in a coordinated manner to ensure a holistic approach to the patient. However, the lack of clear interprofessional communication, the scarcity of material and human resources, as well as the absence of well-defined protocols, can compromise the continuity and quality of care provided [7,8].

The quality of communication between professionals and patients also plays a central role in rehabilitation success. Effective communication can improve patients' understanding of their condition and increase adherence to treatment recommendations [9]. On the other hand, communication failures, mismatched expectations, and lack of clear information can lead to early dropout and dissatisfaction with the treatment received [10,11]. Studies report that patients value direct contact with professionals, especially when they feel heard and welcomed during the recovery process.

Psychological intervention is another essential component of the CVRP, particularly in Phase II. This intervention aims not only to reduce the levels of anxiety and depression, which are often present in cardiac patients, but also to promote behavioral changes, develop coping strategies, and encourage the adoption of healthier lifestyles [12,13]. A previous study showed that negative emotional states were identified as an important barrier to heart-healthy eating, smoking cessation, and stress reduction, while improving mental well-being was identified as an important facilitator of these behaviors [14]. However, the stigma associated with mental health remains a significant barrier to adherence to this component of the program. Many patients associate psychology with "serious mental problems" and therefore refuse psychological help, even when it is essential to the success of rehabilitation.

In this context, it is essential to study both the perceptions of patients participating in CVRPs and those of health professionals implementing them. Patients provide valuable insights into the factors that influence their experience, adherence, and satisfaction with the program, while healthcare professionals can identify the main operational challenges and propose improvements for coordination between different sectors.

The main objective of this study was to explore the effectiveness of the ULSAA CVRP through the perceptions of patients and healthcare professionals. The identified strategies can optimize adherence by enhancing the therapeutic relationship, improving interprofessional and patient communication, increasing multidisciplinary integration, and contributing to cardiovascular patients' more effective and sustainable recovery.

Materials and Methods

Study design

This study adopted a qualitative approach to data collection, focusing on the interpretation of participants' experiences and perceptions using a focus group technique. This methodology was chosen for its ability to foster interaction between participants and create a collaborative environment, facilitating knowledge

sharing between professionals. Furthermore, qualitative research is particularly valuable for capturing meanings, representations, and in-depth perspectives of stakeholders, and is ideal in situations where there is a lack of theoretical knowledge or specific hypotheses [15]. Thus, given the limited literature on CVRPs in Portugal, the need for exploratory research to describe and understand what is done and how this process is implemented became evident. This will allow a more detailed understanding of the object of study and provide a solid basis for formulating future hypotheses.

Participants

The sample was a convenience sample with a total of thirteen participants, representing patients (group I) and health professionals (group II) from the ULSAA CVRP.
Group I consisted of eight patients who had suffered at least one Acute Myocardial Infarction (AMI). Participants were selected based on convenience, ensuring diversity in terms of age, gender, marital status, and family history of CVD (Table 1).

Table 1. Sociodemographic characteristics of group I.

Patient	Time since AMI	Sex	Age (years)	Marital status	Education	Professional Situation	Family History of CVD
P1	< 1 year	F	72	Married	Bachelor's degree	Retired	Presence
P2	< 1 year	M	57	Divorced	Primary Education	Retired	Presence
P3	> 1 year	F	63	Married	Primary Education up to Year 6	Retired	Presence
P4	> 1 year	M	73	Married	Primary Education	Retired	Absence
P5	> 1 year	M	65	Married	Primary Education	Retired	Absence
P6	> 1 year	M	60	Married	Primary Education	Retired	Absence
P7	> 1 year	F	62	Married	Primary Education up to Year 6	Retired	Presence
P8	> 1 year	M	62	Married	Secondary Education	Active	Absence

AMI: acute myocardial infarction; CVD: cardiovascular disease; F: female; M: male

Group II consisted of five multidisciplinary healthcare professionals. These professionals, aged between 30 and 42 years, were selected based on their experience in the different phases of the program and their performance in complementary areas (Table 2).

Table 2. Sociodemographic characteristics of group II.

Healthcare Professional	Function	Service	Acting phase	Professional Experience
H1	Psychologist	Psychiatry and Mental Health	II	< 5 years
H2	Nurse	Cardiology Hospitalization	I	5 to 15 years
H3	Physiotherapist	Physical Medicine and Rehabilitation	II	5 to 15 years
H4	Physiatrist	Physical Medicine and Rehabilitation	II	> 15 years
H5	Nurse	Physical Medicine and Rehabilitation	II	> 15 years

The research took place at the ULSAA facilities, where participants were seated in side-by-side chairs around a round table, in a position that allowed direct eye contact with the moderator. Access to the room was restricted to ensure participants' privacy and to avoid external interruptions.

Instruments

Data from each group were collected at different times, through two different semi-structured interviews, according to the themes related to each class of participants, and recorded digitally. A flexible script of questions was used for both the researcher and the interviewees to know and analyze the perceptions according to the planned objectives, divided into categories and themes, as described in Tables 3 and 4. In addition to the questions related to the study's objective, sociodemographic and professional information was collected through a questionnaire. Each participant was formally informed about the study and signed an informed consent.

Table 3. Description of interview questions of group I.

Category	Theme	Questions
Initial Expectations	**Treatment**	"What were your expectations regarding the treatment and the general protocol you were referred to?" "Did the information you had, through neighbors, friends, family, before the cardiac event and/or your past experiences influence the acceptance of the treatment/integration of the protocol?"
	Psychological Monitoring	"When you were told that you could have group psychology support, what were your expectations?"
	Healthcare Professionals	"Did the information they had and/or past experiences influence the expectations they had of healthcare professionals?"
Patient Perception	**Response to Needs**	"Do you think your needs were met through the protocol you are part of? (If so) In what way?" "Regarding your emotional needs, did you feel that these were respected by the professionals included in the protocol?" * "From your experience, despite being at different stages, do you think that the intervention of the nutrition and psychology areas should have occurred earlier? Do you think that you would have benefited if it had been done immediately after hospitalization?"
	Impact Felt	"Was there any area of your life that suffered more consequences after the cardiac event?" * "Do you think that the physical impact of a heart attack could be related to its psychological impact?"
	Quality of Communication	"How do you evaluate communication with healthcare professionals in the protocol? Do you encounter any difficulties or obstacles?"
	Therapeutic Relationship	"Are you satisfied with the relationship between users and healthcare professionals in the protocol?"
Satisfaction with Psychological Intervention	**Session Content**	"Regarding the psychology sessions, what was the topic that interested you most?" "Was there a topic that you would have liked to see presented that was not?"
	Therapeutic Approach	"Which approach to the psychology group sessions interested you most: the informative content or the group dynamics?" * "Do you think it is necessary/important to include family members in the process?"
	Patient Comments	"Regarding the psychology program, would you recommend it to anyone? What would you say about the group sessions?"

*Additional questions

Table 4. Description of interview questions of group II.

Category	Theme	Questions
Expectations Regarding the CVRP	**Implementation**	"What were your expectations regarding the implementation of the multidisciplinary program in this hospital unit?" "What is the health professional's perception of the program?" "How do you describe how monitoring is carried out?" "Ideally, should there be a specific order of action for the various areas?"
	Inclusion of Psychology	"Are all individuals included in the protocol flagged for the Psychology program or only those who present a more intense or maladaptive emotional response?"
Effectiveness of the Multidisciplinary Approach	**Success Factors**	"What do you consider to be the success of this program?" "What would you propose for continuous improvement?"
	Responding to Patients' Needs	"What is your perception about the program responding to users' needs?" "What do you consider to be patients' expectations regarding it?" "Do you think that emotional responses are a direct consequence of the cardiac event or are they intensified by it?"
	Therapeutic Adherence	"From your professional experience with this protocol, what is your perception of patient adherence?" "What could be the main factors in the adherence process?"
	Family Participation	"Has the spouse ever participated in the process?" "Would they consider such participation pertinent?"
Communication	**Quality of Communication**	"To what extent can the quality of communication affect therapeutic efficacy or adherence?"

CVRP: cardiovascular rehabilitation program

Ethical considerations

The ULSAA Health Ethics Committee authorized the study to be carried out, through the positive opinion received on April 2, 2024, with reference 20/2024. Participants must be fully aware of the objectives of the study, the potential risks and benefits, and their freedom to withdraw at any time, without penalty. Confidentiality represents a significant challenge in studies that use focus groups, since interaction between multiple participants can compromise the privacy of the information shared. In this sense, it is crucial to implement effective strategies that protect personal data and guarantee anonymity in the dissemination of results. One such strategy includes the use of identification codes in the transcripts, avoiding any direct association with the participants. Additionally, creating a safe and respectful environment, where participants feel comfortable sharing information, is essential to protect their privacy.

Data collection

The interviews were conducted in person, at two different times, in the ULSAA. At the beginning of each session, the moderator introduced the topic and encouraged the participants to express their opinions freely. To ensure comprehension, the study's objectives were explained verbally. Participants were arranged in a circle, creating a welcoming environment, which facilitated interaction and audio recording. In addition to the moderator who conducted the interview, there was an observer who managed the time and identified the participants' statements with numerical codes; depending on the class of participants, healthcare professionals were identified as "H1", "H2", ..., "H5", and patients as "P1", "P2", ..., "P8", thus ensuring anonymity and compliance with ethical guidelines. The discussion, lasting about an hour, followed a flexible question guide that allowed new ideas to emerge spontaneously and impartially.

Data analysis

Bardin's (1977) content analysis consists of a systematic approach structured in three main stages: pre-analysis, exploration of the material, and processing of the results. The first stage, entitled pre-analysis, involved a general reading of the data and systematization of the initial ideas, based on the theoretical framework and the definition of indicators for the interpretation of the information collected. The second stage, the exploration of the material, was characterized by information coding, where the data were cut

into recording units, such as words, sentences, or paragraphs, and grouped into thematic categories. In the third stage, related to the processing of the results, inference and interpretation were made based on the manifest and latent contents. The transcribed interviews were re-read several times, ensuring adequate familiarization with the data, to facilitate the identification of the main ideas reported by the participants. Subsequently, based on the categorization of the data, categories and themes were defined. Some of these categories were established from the beginning, according to the specific objectives of the study, while others emerged during the analysis process [16].

Results

Data analysis was structured around the main objective of the research, based on interviews conducted with health professionals and users involved in the CVRP. The categories of questions, which include several categories divided into themes, allowed the information to be organized systematically. Therefore, the following tables (Tables 5 and 6) present the results obtained in the study.

Table 5. Presentation of patients' results.

Category	Theme	Participant	Answers
Initial Expectations	**Treatment**	**P1**	"I thought that, after that, I would just come for the cardiology consultation and that nothing else would happen. I was surprised when they started calling me (…). I was really pleased with the care the hospital gives to cardiac patients."
		P2	"(…) I already had more or less an idea of what was going to happen. Many disciplines in the treatment: heart, psychology, nutrition, physiatry, gymnastics."
		P3	"Very well from the very first minute, at every level."; "Someone told me to go to the hospital because they thought I was having a heart attack, but I ignored it and only came back three days later. But they warned me (…)."
		P2	"Sometimes we think, 'What am I going to do to the hospital? They're going to send me away right away', so we delay taking action."
	Psychological Support	**P1**	"(…) I had no idea that I would be monitored in the way that I was. I thought that I would have a first consultation and then, a long time later, I would have another one. I was surprised that there was a sequence (…)."
		P2	"When someone is admitted to the hospital and they are told that they will have psychological consultations, they immediately think, 'but I'm not crazy (…)'. The heart can have several problems due to psychology."
	Healthcare Professionals	**P2**	"No, because it's not the same for everyone. All heart attacks are very different."
		P1	"The information I have today has nothing to do with what I knew."
Patient Perception	**Response to Needs**	**P2**	"At all levels: psychological, cardiac, physiatric, gymnastics, all of this is useful."
		P6	"Regarding psychology and nutrition, it took a little longer. (…) There were people who received an answer almost immediately."
		P1	"It took me almost half a year [to receive services]."
		P2	"But doesn't that depend on how people feel after the heart attack? Some cases are more serious than others. Perhaps they should bring forward consultations in these cases."
		P6	"As I was quite affected, I had a lot of consultations in the early days."; "Yes, completely [needs respected by health professionals]."
		P1	"They are doing an excellent job."
		P2	"I am lucky, because it did not affect any area of my life."

	Impact Felt	**P1**	"It's changed for me, because now I only do what I want. I don't cook if I don't feel like it, I don't vacuum (…)."
		P4	"For me, after my first heart attack, everything changed. I retired."
		P5	"I didn't retire straight away, but I was on sick leave for over a year."
		P6	"I was unable to move my legs for a month and I didn't even have surgery. And in terms of my diet, there was a change (…)."
		P5	"At first, I said, 'I'm getting tired now, I'll never be the same again, I won't be able to do this or that.' My wife was the one who asked me to be calm (…)."
	Quality of Communication	**P4**	"It depends on the professional."; "A nutritionist turned to me and said: 'You can't eat this, you can't eat that' and I thought 'Now I'm going to die, if I can't eat anything'."
		P1	"I spent a lot of time in cardiology and physiatry consultations. They never sent me away. They always answered my questions; I never felt any obstacles."
	Therapeutic Relationship	**P5**	"I was always rushing to my appointments, distracted, and once I passed by a doctor and didn't even notice. She made a point of coming to talk to me and asking how I was. I was happy that she remembered me."
		P1	"The physiatrist called me and we spent a long time talking. It was a welcoming experience (…)."
		P6	"Doctors are very intelligent and have an excellent ability to recognize a person."
Satisfaction with Psychological Intervention	**Session Content**	**P1**	"I enjoyed talking about stress, which was what affected me the most."
		P6	"Anxiety and stress."
		P5	"Stress and anxiety were the two most important topics. (…) The techniques we learned also helped, such as breathing."; "I think it was important to have information to give to family members, who sometimes are more anxious than we are."
	Therapeutic Approach	**P8**	"I liked that it was in a group."
		P7	"Group activities."
		P1	"I think that sharing is enriching, as is complementing theory with practice."
		P6	"(…) should come first. First the companions and then the patients."
		P5	"Sometimes wives, like us, are not prepared for the change in responsibilities."
		P2	"(…) depending on the severity, you may need more or less of your partner."
	Patient Comments	**P1**	"(…) For me, it was great; I highly recommend it."
		P5	"Yes, I would recommend it."
		P2	"I recommend it to all patients. I have always valued psychology."
		P7	"I already had psychology consultations, and I continue to encourage people to seek help when they don't feel well."
		P8	"I always said that everything was fine and today I can value psychology consultations more."
		P1	"I already had a lot of respect."

Initial expectations

Patients' expectations regarding treatment varied significantly. In the case of P1, the participant expected only cardiology consultations and was surprised to discover that the protocol included multidisciplinary care, involving several specialties. On the other hand, P2 already had a clearer idea of what to expect,

knowing that the treatment would involve several areas, such as psychology, nutrition, physiotherapy, and cardiology. P3 also expressed satisfaction from the beginning, feeling well cared for at all stages. Overall, initial expectations were low compared to what the program had to offer, with most participants being pleasantly surprised by the breadth and care offered in the rehabilitation protocol.

The influence of information obtained before the cardiac event on patients' decisions revealed differences among the study participants. P1 was unaware of the recurrence of heart attacks before participating in the group and now shows greater awareness. P3, when the symptoms of the heart attack began, was alerted by an acquaintance, who helped her recognize the problem, although the patient took a long time to act. P2 commented that the hesitation in seeking hospital care quickly may arise due to the idea that doctors will not pay the intended attention. In summary, prior information influenced some patients, but the lack of awareness or underestimation of the symptoms may have affected the reaction time to the heart attack.

Patients had varying expectations about psychological support after a cardiac event. P1 did not expect continuous support, believing it would be sporadic, and was surprised by the systematic approach to treatment. P2 initially associated psychology with a stigma, thinking it was for "crazy" people, but recognized that psychological problems can influence the onset of heart disease. Regarding this topic, patients admitted to having initially underestimated the importance of psychological support; however, over time, they began to realize its crucial role in treatment.

When questioned about the influence of previous information and experiences on expectations regarding healthcare professionals, P2 stated that he did not feel this influence, justifying that each heart attack is different, and situations vary. P1 mentioned that the knowledge acquired after the heart attack completely changed his view, compared with what he knew previously. Thus, both highlighted that their perceptions changed after their personal experience, showing that previous information did not greatly impact their initial expectations.

Patient perception

Participants assessed whether the protocol met their needs. P2 stated that he received comprehensive support in several areas, such as psychology, cardiology, and physiotherapy, and found it useful. P6 mentioned that, in his case, the psychology and nutrition care took longer, with the nutrition consultation occurring only one year after the heart attack, while other people received care faster. When discussing the response time for care, responses varied. P1 reported a wait of almost six months, and P2 suggested that the urgency of care could depend on the severity of the case, with earlier consultations for more serious patients, as confirmed by P6, who had many consultations right from the beginning, stating that his case was more severe. Regarding emotional needs, participants felt fully respected by the professionals, highlighting the good work done.

The members of the CVRP reported having felt different impacts on their lives after the cardiac event. P2 stated that his life did not undergo major changes, unlike P4, who reported having experienced a significant change when he retired after his first heart attack (he had three heart attacks in total), as well as P5, who obtained a certificate of temporary incapacity (more than one year). P1 stated that he had changed his attitude, prioritizing doing only what he wanted, so he would stop cooking or doing housework if he did not want to.

When asked about the relationship between the physical and psychological impact, everyone agreed there was a connection. P6 shared that he was unable to move his legs for a month and had to change his diet. P5 initially reported feeling discouraged by the loss of energy and fear of never being the same again; however, with time (and help from his wife), he learned to be patient and understand the severity of the situation.

Communication with healthcare professionals was perceived differently. P4 mentioned that the quality of communication depends on the professional. P1 reported a very positive experience, highlighting that, in cardiology and physiatry consultations, he had time to clarify all his doubts, without feeling rushed or hindered. However, P4 shared a less positive experience with a nutritionist, who, according to the patient, presented dietary restrictions abruptly, leaving him concerned about the limitations.

Participants expressed satisfaction when asked about their relationship with the healthcare professionals in the protocol. P5 shared that he was impressed and happy when a female doctor recognized him and made a point of approaching him, which he said demonstrated personal care. P1 reported a similar experience, mentioning that the physiatrist even called him, providing a feeling of welcome. P6 praised the doctors, emphasizing their intelligence and excellent ability to recognize and connect with patients. Thus, overall, participants felt well-treated and welcomed by the professionals.

Satisfaction with psychological intervention

Stress and anxiety were the topics most mentioned by participants as being of greatest interest in the psychology sessions. P6 and P5 agreed that both topics were crucial and very well addressed, with P1 admitting to having been affected by stress. P5 also highlighted the usefulness of the techniques learned, such as breathing, to deal with these issues. When asked about the lack of topics, P5 suggested that it would be important to include more information for the patients' families, as in some cases they may feel more anxious than the patients themselves.

Participants expressed a preference for group dynamics in psychology sessions, with P1 highlighting the importance of sharing experiences and the balance between theoretical and practical approaches. Regarding the inclusion of family members in the process, there was consensus on its importance. P5 and P6 considered it essential to involve family members in the sessions, suggesting giving priority to caregivers, justified by their lack of preparation for new responsibilities. P2 underscored that the need for support from family members may vary, depending on the severity of the patient's condition, suggesting that some may need more or less help from their spouse or partner, depending on the situation.

Participants expressed a strong appreciation for the psychology program and would highly recommend it to others. P1 added that he had a high regard for psychology even before the program, describing the sessions as an opportunity to "cleanse the soul". P5 and P2 would also recommend the program, with P2 stating that he has always valued psychology. P7, who has experience with individual psychology consultations, continues to encourage others to seek help when needed. P8 commented that he used to downplay the importance of counseling, but now values psychology consultations more.

Table 6. Presentation of healthcare professionals' results.

Category	Theme	Participant	Answers
Expectations regarding the CVRP	**Implementation**	H2	"We often saw patients during hospitalization, and, after discharge, they were only seen again for a consultation two or three months later. Having this program allows for continuous monitoring, checking whether there is adherence to treatment and encouraging it."
		H4	"This program is almost mandatory in the *guidelines* for post-infarction treatment and other cardiac pathologies and the objective is to offer the best possible conditions to the population, guaranteeing continuity of care and providing monitoring that allows patients to have the healthiest life possible."
		H1	"I envisioned a more coordinated process, without large time gaps between the referral to Psychology and the physical intervention. However, I realize that there is a considerable time lag (…)."
	Inclusion of Psychology	H4	"The documents indicate that all patients should be referred to Psychology, but acceptance varies. Although most patients end up accepting psychological support, there are those who refuse because they believe they do not need it or because of prejudice (...)."
		H2	"Psychology is essential because it can help to understand the emotional impact of the patient's condition, with the most frequent emotional responses including anxiety and fear, often exacerbated by the cardiac event."
		H1	"Not all individuals included in the protocol are referred to Psychology, and I believe that this compromises the process."
Effectiveness of the Multidisciplinary Approach	**Success Factors**	H5	"Success depends on patients' adherence to all areas of the program, as they are complementary; however, patient motivation is a critical factor and difficult to modify (...)."
		H2	"Evaluating the long-term effectiveness of the program, with the introduction of the third phase, was an important step. The success of the program depends on patients' adherence to all its components, as they are all complementary."
		H3	"The program is comprehensive and complemented by patient education, creating a close relationship with them. Patient motivation is a limiting factor, since in the first sessions it is already possible to predict whether they will adhere."
	Responding to Patient's Needs	H5	"Patients remain confused and do not fully understand what has happened to them and what they are going to do (...)."
		H4	"Patients often have no clear idea of what they are coming here to do and often leave the decision in the hands of doctors (...)."
		H2	"(...) What patients are looking for most is support and confidence (...)."

		H1	"The feedback from the program is positive, but still insufficient due to the lack of responsiveness. I believe that patients initially expect more individualized monitoring but end up realizing the limitations of the program."
	Patient Adherence	H3	"Some patients lack insight into the severity of their condition, which hinders acceptance of treatment (...)."
		H2	"Many patients drop out of the program due to professional issues or because they believe their problem is not serious enough."
		H1	"Ideally, [psychological] support should start individually and then move on to a group setting, but the lack of resources requires a direct group approach, which may not meet patients' expectations. Prejudice against psychology, especially among older patients, is also a significant obstacle."
	Family Participation	H2	"Family participation is important not only for emotional support, but also because changes in the patient's lifestyle affect the entire family."
		H5	"In educational sessions, family members can participate, which is very useful as it involves two people in the lifestyle change process."
		H1	"The participation of family members in the process is seen as pertinent, but it can affect the patients' sharing. Ideally, there should be separate groups for family members, but the ability to respond is a problem. However, specific information sessions for family members could be viable and beneficial, without interfering with the patients' therapeutic process."
Communication	**Between Healthcare Professionals and Patients**	H5	"The quality of communication significantly affects therapeutic adherence. It is essential that the information is clear and understood by the patient. Patients often leave with different ideas from what they were told, which can compromise adherence to treatment."
		H1	"The quality of communication is crucial for therapeutic adherence. Communication is often lacking, leading to incorrect expectations on the part of patients. An initial clarification session could help to align expectations and improve adherence to the program."
		H4	"Although we explain the risks and benefits, the final decision is always up to the patients. Sometimes, they join the program more out of habit or because 'it's part of it', than because they truly understand its importance."
	Team Level	H1	"Clear and ongoing communication between the team is essential to the success of the treatment."
		H3	"Regular meetings between teams would be essential to align strategies and ensure that monitoring was truly multidisciplinary."

Expectations regarding the CVRP

The professionals' initial expectations were characterized by an anticipation of greater effectiveness in the continuous monitoring of patients, highlighting the importance of providing continuity of care. However, a more critical view was also presented, as some challenges were described at the level of efficient coordination in the practical implementation of the program.

Regarding the implementation of psychological intervention in the CVRP, health professionals generally expressed positive expectations, recognizing it as fundamental in providing emotional support to patients. Despite this, difficulties were revealed regarding the coordination and integration of psychology with other areas of the program, noting that psychological intervention ends up being individualized, compared to the other areas of intervention, which undermines the overall impact of the treatment. Another point highlighted was the difficulty in ensuring that all patients adhere to psychological monitoring, even when referred. It was emphasized that many patients refuse this component due to prejudice or a lack of understanding about its relevance. The most common emotional responses among patients include anxiety and fear. This information was completed with the comment that, in many cases, premorbid anxiety in cardiac patients can be a factor of difficulty in group treatment and monitoring, an intervention method administered at the ULSAA.

Effectiveness of the multidisciplinary approach

The perception of healthcare professionals is, in fact, positive; however, their statements consistently highlight the need for continuous adjustments to overcome the challenges identified. The third phase of the program was praised, but they also warned about the issue of patient adherence. The difficulty in promoting lasting changes in patient behavior is an important factor for the success of the CVRP, and all the elements corroborated this view, praising the program's comprehensiveness. This motivation is a challenge that directly affects patient adherence, impacting the effectiveness of the treatment, and is a central point for all professionals involved in the CVRP, who consider full adherence as fundamental to achieving the desired results. However, the challenges go beyond mere patient motivation, and the need for a structural review of the program is frequently highlighted. Such a review is seen as crucial to optimizing coordination between the different specialties.

Most healthcare professionals acknowledged the program's effectiveness in responding to patients' needs, highlighting the importance of the multidisciplinary approach. However, they mentioned that the lack of resources and limited coordination between areas compromised the program's optimal responsiveness. This support provided greater security and confidence for both professionals and patients, who often did not fully understand the severity of their condition without this additional support. This points to a disconnection between patients' expectations and what the program actually offers, and ends up impacting decision-making. Although the program aims to educate patients and empower them to make informed decisions about their treatment, many join the program without a deep understanding of its benefits, thus limiting adherence success. The importance of empowering patients to manage their own risk factors was also reinforced, complementing physical rehabilitation with an educational approach. While this educational component was considered essential, it was also mentioned that the fragmentation of the program and the lack of human resources limited the ability to provide more individualized monitoring.

Regarding psychological monitoring, some barriers were mentioned regarding the type of intervention carried out, as it would be expected that monitoring should begin individually and then evolve to group interventions. Yet, the lack of resources imposed a direct group approach, which does not always meet the patients' expectations. Regarding the Psychology program, in addition to the lack of understanding, prejudice against Psychology, especially among older patients, is also a significant obstacle, which limits adherence to the psychological component of the program.

Family participation in the therapeutic process was widely valued by the professionals interviewed and was seen as an important element of support for the success of the treatment. The inclusion of family members, especially in educational sessions, was highlighted as an effective strategy to promote changes in the patient's lifestyle habits and facilitate adherence to the program, underlining the importance of integrating family members to reinforce the patient's commitment to treatment. In addition to emotional support, professionals also noted that this participation helps to create an environment for behavioral change, which is often reflected in the family routine, and ends up being more favorable to the continuity of interventions. However, despite the benefits recognized, some reservations arose regarding the impact of the presence of family members on therapeutic dynamics. They agreed that the presence of family members can inhibit patients from fully expressing their emotions or concerns during sessions. This suggests that, although this involvement is important, it can interfere with the dynamics of open sharing, required for certain aspects of the therapeutic process, such as psychological support.

Ideally, there would be separate family sessions, creating distinct spaces where both patients and their relatives could address their concerns more freely and effectively. However, due to resource constraints, this separation of sessions is not feasible in the current reality of the program, which presents an additional challenge as we balance the need for family involvement with ensuring that patients have a safe space to share their experiences genuinely and without reservation.

Existence of noise or obstacles to the quality of communication

Communication was identified as one of the greatest challenges of the CVRP, both among health professionals and in the relationship with patients. The lack of coordination and clarity in the information transmitted directly affected patient adherence to the program, highlighting the importance of transmitting guidelines clearly and understandably. The impact of communication on patient adherence was also reinforced, suggesting a more structured approach, similar to that used in other programs in the same hospital unit. The truth is that, even after explanations about the program's benefits, many patients adhere without a real understanding of its importance, which reduces the effectiveness of the monitoring.

Communication between multidisciplinary teams was identified as one of the main obstacles to the program's effectiveness and was considered essential for therapeutic success. All professionals interviewed emphasized the importance of intersectoral coordination, although they recognized that this articulation does not always occur smoothly. One of the interviewees highlighted that, ideally, all specialties should start monitoring during hospitalization, suggesting that early and simultaneous monitoring of several specialties would be the ideal scenario to ensure integrated rehabilitation from the beginning.

Regular coordination, with interdisciplinary meetings and case discussions, was highlighted as an effective solution to mitigate the fragmentation of care; however, despite agreeing with the need for a more integrated communication flow, many professionals regretted that the lack of time and resources prevents the consistent implementation of this practice.

Discussion

The analysis of the data obtained in the study on the implementation of the ULSAA CVRP revealed that both healthcare professionals and patients perceive this program as an essential intervention for post-infarction recovery, but identify important challenges that compromise its full effectiveness. The increase in the population of cardiovascular disease survivors, many of whom require continuous care, places increasing pressure on health systems, highlighting the need for efficient and comprehensive rehabilitation programs [17].

Healthcare professionals expressed high expectations regarding the CVRP, especially regarding continuity of care and patient adherence to treatment, highlighting the importance of structured monitoring at all stages of the recovery process. This view is in line with the literature, which underscores that continuity of care is crucial for effective recovery after cardiac events [18,19]. However, they faced challenges in implementing the program, namely the fragmentation of care and the shortage of human and material resources, which made coordination between the different areas of intervention difficult. In turn, patients arrived at the program with varied initial perceptions, often unaware of the breadth of services offered. The discovery of the multidisciplinary nature of the protocol was accompanied by a generally positive assessment, but some reported delays in accessing specialties such as psychology and nutrition, which compromised the experience in terms of continuity of care. Studies also point to structural barriers and a lack of medical referrals as obstacles to treatment [20].

Both groups recognized the multidisciplinary approach as a strength of the CVRP, allowing it to meet diverse patient needs. However, professionals highlighted the segmentation of specialties and the lack of interprofessional communication as barriers to the full effectiveness of the program. Studies reinforce that a cohesive and well-coordinated health team is essential for the success of cardiovascular rehabilitation [21], but the lack of efficient communication undermines the continuity of care and the holistic view of the patient. Epstein (2014) suggests that more structured and regular communication between specialties can improve patient adherence and ensure more effective continuity of care [22].

The impact of the cardiac event varied among patients. Some reported significant changes in their work and daily lives, adjusting personal priorities to focus on physical recovery, while others reported no significant changes. These reports are in line with studies that demonstrate the difficulty in reintegrating into work after a heart attack, especially in physically demanding occupations [23]. The relationship between physical and psychological impact has been widely recognized, with patients highlighting the importance of family support for accepting new limitations and adapting to the new health context. Coyne and Van Horn (2021) emphasize that family support is crucial to alleviate anxiety and promote more effective adaptation [24]. Living in a single-person household can be a barrier, while a multi-person household serves as a facilitator, which suggests the importance of social support associated with living arrangements [25].

Psychological intervention was another critical aspect analyzed. Professionals highlighted its relevance but pointed out obstacles such as patients' resistance to accepting psychological support and the lack of fluid integration between the medical and psychological areas. This resistance compromises patient adherence and the overall effectiveness of treatment, since emotional support is essential to deal with the changes resulting from a cardiac event [26]. In contrast, patients who participated in group psychology sessions valued mutual support and the exchange of experiences, underlining the positive impact of social support in reducing isolation and improving emotional well-being [27]. However, some mentioned the initial prejudice against psychology, highlighting the need to demystify the importance of mental health in the context of cardiac rehabilitation [28].

Communication between health professionals and patients was a determining factor for adherence to the CVRP. Although some patients praised the individualized attention and empathetic care, others reported unsatisfactory experiences, such as a lack of sensitivity and empathy in the guidelines. The literature indicates that clear and empathetic communication is essential to promote treatment adherence [29]. The limited exchange of interdisciplinary information also compromised the personalization of therapeutic plans, making it difficult to formulate approaches consistent with patients' needs.

Finally, the inclusion of family members in the rehabilitation process was identified as a necessity. While some professionals highlighted the positive role of family members in providing emotional support, others warned of the risk of excessive interference. Studies show that active involvement of family members in rehabilitation programs significantly improves patient outcomes, promoting greater adherence to treatment and better adjustment to lifestyle changes [30]. However, the absence of sessions aimed at family members was identified as a gap that, if filled, could contribute to a more complete and integrated experience.

In summary, the ULSAA CVRP has proven to be an effective intervention for patients' physical and emotional recovery, but faces challenges related to adherence, interdisciplinary coordination, and communication.

In the national context, cardiac rehabilitation is recognized for its effectiveness, but access to these programs faces challenges, such as limited resources and low patient adherence. Compared to other developed countries, Portugal still needs to make progress in expanding coverage and offering interventions at earlier stages of recovery. Despite these limitations, existing CVRPs have demonstrated positive results, contributing to faster recovery and a substantial improvement in the participants' quality of life.

The findings of this study underline that the effective implementation of the CVRP in the ULSAA faces significant challenges but also presents positive results that demonstrate its relevance in post-infarction recovery. The program has proven to be an essential intervention by integrating several areas of expertise, such as cardiology, physiotherapy, psychology, nutrition, and nursing, which provides personalized and comprehensive care. The implementation of supervised physical exercises, combined with guidance on lifestyle changes, contributed to patients' physical and functional recovery, allowing them to resume their daily activities with greater confidence and security.

However, one of the main challenges identified is the fragmentation of care between different specialties, which compromises overall therapeutic effectiveness. The lack of efficient communication between professionals results in disjointed approaches, making it difficult to formulate integrated therapeutic plans adapted to patients' individual needs. Overcoming this barrier depends on promoting regular interdisciplinary meetings and implementing clear protocols that ensure continuous and coordinated intervention. A multidisciplinary approach could optimize clinical results and ensure a more complete recovery.

The early integration of psychological support into the CVRP acts preventively and promotes a more effective recovery. The group sessions were widely valued by patients, who reported significant improvements in issues related to stress and anxiety. The sharing environment of the sessions created a network of emotional support that not only reduced patients' isolation but also promoted a sense of community and identification with others who had gone through similar experiences. However, the study revealed that the stigma associated with mental health still represents an obstacle to adherence to these interventions, making it necessary to create educational sessions that demystify psychological support and reinforce its importance as an integral part of rehabilitation. Another critical point identified was the lack of involvement of family members in the rehabilitation process, despite patients highlighting its relevance for the success of the treatment. Family support is essential to decrease patients' anxiety and facilitate adherence to the necessary lifestyle changes. It is therefore suggested that specific support structures for family members be created, which can guarantee both the privacy of patients and the inclusion of caregivers in the rehabilitation process.

Patients also reported mixed experiences regarding communication with healthcare professionals. While some highlighted the warm welcome and individualized attention they received, others mentioned episodes of non-empathetic communication, which compromised the overall perception of quality of care. This gap reinforces the need for investment in training to develop the social and communication skills of healthcare professionals, focusing on empathy and communication in the hospital setting.

Our results evidenced the long response time in some areas, such as nutrition and psychology, which generated patients' dissatisfaction. In addition, adherence to the program is still critical. Initial information sessions can clarify the benefits of CVRP and increase patients' commitment to treatment. These sessions could also include guidance on the early identification of heart attack symptoms and the importance of seeking immediate medical assistance, considering that the underestimation of symptoms is still a worrying reality.

The geographical restriction, the short implementation period of the CVRP, and the small number of participants limit the generalization of the results. As the researchers were also the psychologists who implemented the program, there is a possibility of bias that may have influenced the patients' perceptions of the psychological intervention.

In conclusion, the ULSAA CVRP represents a valuable initiative in cardiovascular rehabilitation, promoting a more complete recovery by addressing both the physical and psychological aspects of the disease. However, for the program to be fully effective, it is essential to mitigate the challenges identified, such as fragmentation of care, insufficient interprofessional communication, and scarcity of resources. Future studies should incorporate both quantitative and qualitative data to strengthen the evidence base for ongoing improvements in the CVRPs, aiming for a fully integrated and multidisciplinary approach to cardiac rehabilitation.

Acknowledgments

The authors would like to thank the patients for their participation and valuable contributions to this study. This research received no external funding.

Author Contributions

AV and RR participated in the study's investigation, methodology, and writing of the original draft. GM contributed to the study's supervision, conceptualization, and resources. AT and VA were involved in the conceptualization and methodology of the work, as well as in the manuscript's revision and editing. All authors read and approved the final manuscript.

Conflicts of interest

The authors declare no competing interests.

References

1. Heran, B.S., C.J.M., M.L. Challenges in Resource Allocation for Cardiac Rehabilitation Programs. *Heart and Lung Journal* **2011**, *40*, 100–110.
2. Vrints, C.; Andreotti, F.; Koskinas, K.C.; Rossello, X.; Adamo, M.; Ainslie, J.; Banning, A.P.; Budaj, A.; Buechel, R.R.; Chiariello, G.A.; et al. 2024 ESC Guidelines for the Management of Chronic Coronary Syndromes: Developed by the Task Force for the Management of Chronic Coronary Syndromes of the European Society of Cardiology (ESC) Endorsed by the European Association for Cardio-Thoracic Surgery (EACTS). *Eur Heart J* **2024**, *45*, 3415–3537, doi:10.1093/EURHEARTJ/EHAE177.
3. Reich, B.; Benzer, W.; Harpf, H.; Hofmann, P.; Mayr, K.; Ocenasek, H.; Podolsky, A.; Pokan, R.; Porodko, M.; Puelacher, C.; et al. Efficacy of Extended, Comprehensive Outpatient Cardiac Rehabilitation on Cardiovascular Risk Factors: A Nationwide Registry. *Eur J Prev Cardiol* **2020**, *27*, 1026–1033, doi:10.1177/2047487319898958.
4. Boehm, L.M.; Potter, K.; McPeake, J.; Shaw, M.; Su, H.; Jones, A.C.; Renard, V.; Eaton, T.L.; Boethel, C.; Butler, J.; et al. Understanding Attendance Patterns and Determinants in Cardiac, Pulmonary, and ICU Rehabilitation/Recovery Programs: A Systematic Review and Meta-Analysis. *Heart and Lung* **2025**, *69*, 51–61, doi:10.1016/j.hrtlng.2024.09.010.
5. Goodwin, L.; Ostuzzi, G.; Khan, N.; Hotopf, M.H.; Moss-Morris, R. Can We Identify the Active Ingredients of Behaviour Change Interventions for Coronary Heart Disease Patients? A Systematic Review and Meta-Analysis. *PLoS One* **2016**, *11*, e0153271, doi:10.1371/JOURNAL.PONE.0153271.
6. Fletcher, G.F.; Landolfo, C.; Niebauer, J.; Ozemek, C.; Arena, R.; Lavie, C.J. Promoting Physical Activity and Exercise: JACC Health Promotion Series. *J Am Coll Cardiol* **2018**, *72*, 1622–1639, doi:10.1016/J.JACC.2018.08.2141.
7. Zijl, A.L. van; Vermeeren, B.; Koster, F.; Steijn, B. Interprofessional Teamwork in Primary Care: The Effect of Functional Heterogeneity on Performance and the Role of Leadership. *J Interprof Care* **2021**, *35*, 10–20, doi:10.1080/13561820.2020.1715357.
8. Duda-Sikuła, M.; Kurpas, D. Barriers and Facilitators in the Implementation of Prevention Strategies for Chronic Disease Patients—Best Practice GuideLines and Policies' Systematic Review. *Journal of Personalized Medicine 2023, Vol. 13, Page 288* **2023**, *13*, 288, doi:10.3390/JPM13020288.
9. Sarkar, U.; Schillinger, D.; Bibbins-Domingo, K.; Nápoles, A.; Karliner, L.; Pérez-Stable, E.J. Patient–Physicians' Information Exchange in Outpatient Cardiac Care: Time for a Heart to Heart? *Patient Educ Couns* **2011**, *85*, 173–179, doi:10.1016/J.PEC.2010.09.017.
10. Alves, E.; Magalhães, P.; Lunet, N.; Ferreira, P.M.; Silva, S. Acessibilidade e utilização de fontes de informação em saúde cardiovascular: perceção de doentes e médicos. *Arquivos de Medicina* **2014**, *28*, 137–144.
11. de Lima Andrade, E.; da Cunha e Silva, D.C.; de Lima, E.A.; de Oliveira, R.A.; Zannin, P.H.T.; Martins, A.C.G. Environmental Noise in Hospitals: A Systematic Review. *Environmental Science and Pollution Research* **2021**, *28*, 19629–19642, doi:10.1007/S11356-021-13211-2/TABLES/6.
12. Shi, W.; Ghisi, G.L.M.; Zhang, L.; Hyun, K.; Pakosh, M.; Gallagher, R. A Systematic Review, Meta-Analysis, and Meta-Regression of Patient Education for Secondary Prevention in Patients with Coronary Heart Disease: Impact on Psychological Outcomes. *European Journal of Cardiovascular Nursing* **2022**, *21*, 643–654, doi:10.1093/EURJCN/ZVAC001.
13. Bourke, A.; Niranjan, V.; O'Connor, R.; Woods, C. Barriers to and Motives for Engagement in an Exercise-Based Cardiac Rehabilitation Programme in Ireland: A Qualitative Study. *BMC Primary Care* **2022**, *23*, 28, doi:10.1186/s12875-022-01637-7.
14. Douma, E.R.; Wirtz, S.; Fernandez, M.S.; Schäfer, H.; Widdershoven, J.W.M.G.; Habibović, M.; Gil, C.P.; Bosch, J.A.; Schmitz, B.; Kop, W.J. Patient-Reported Preferences in EHealth-Based Cardiac Rehabilitation: A Qualitative Investigation of Behavior Change Techniques, Barriers and Facilitators. *Internet Interv* **2024**, *35*, 100728, doi:10.1016/J.INVENT.2024.100728.
15. Hennink, M.M..; Hutter, Inge.; Bailey, Ajay. *Qualitative Research Methods*; SAGE, 2020; ISBN 1473944252.
16. Bardin, L. *Análise de Conteúdo.*; Edições 70: Lisboa, 1977; ISBN 972-44-0898-1.
17. Bracewell, N.J.; Plasschaert, J.; Conti, C.R.; Keeley, E.C.; Conti, J.B. Cardiac Rehabilitation: Effective yet Underutilized in Patients with Cardiovascular Disease. *Clin Cardiol* **2022**, *45*, 1128–1134, doi:10.1002/clc.23911.
18. Giuliano, C.; Parmenter, B.J.; Baker, M.K.; Mitchell, B.L.; Williams, A.D.; Lyndon, K.; Mair, T.; Maiorana, A.; Smart, N.A.; Levinger, I. Cardiac Rehabilitation for Patients With Coronary Artery Disease: A Practical Guide to Enhance Patient Outcomes Through Continuity

of Care. *Clin Med Insights Cardiol* **2017**, *11*, doi:https://doi.org/10.1177/1179546817710028.

19. Bohplian, S.; Bronas, U.G. Motivational Strategies and Concepts to Increase Participation and Adherence in Cardiac Rehabilitation. *J Cardiopulm Rehabil Prev* **2022**, *42*, 75–83, doi:10.1097/HCR.0000000000000639.
20. Vazquez-Guajardo, M.; Rivas, D.; Duque, G. Exercise as a Therapeutic Tool in Age-Related Frailty and Cardiovascular Disease: Challenges and Strategies. *Canadian Journal of Cardiology* **2024**, *40*, 1458–1467, doi:10.1016/j.cjca.2024.01.005.
21. McCutcheon, L.R.M.; Haines, S.T.; Valaitis, R.; Sturpe, D.A.; Russell, G.; Saleh, A.A.; Clauson, K.A.; Lee, J.K. Impact of Interprofessional Primary Care Practice on Patient Outcomes: A Scoping Review. *Sage Open* **2020**, *10*, doi:10.1177/2158244020935899.
22. Epstein, N. Multidisciplinary In-Hospital Teams Improve Patient Outcomes: A Review. *Surg Neurol Int* **2014**, *5*, 295, doi:10.4103/2152-7806.139612.
23. Andersen, E.B.; Kristiansen, M.; Bernt Jørgensen, S.M. Barriers and Facilitators to Return to Work Following Cardiovascular Disease: A Systematic Review and Meta-Synthesis of Qualitative Research. *BMJ Open* **2023**, *13*, e069091, doi:10.1136/bmjopen-2022-069091.
24. Shoushi, F.; Janati, Y.; Mousavinasab, N.; Kamali, M.; Shafipour, V. The Impact of Family Support Program on Depression, Anxiety, Stress, and Satisfaction in the Family Members of Open-Heart Surgery Patients. *Journal of Nursing and Midwifery Sciences* **2020**, *7*, 69, doi:https://doi.org/10.4103/jnms.jnms_21_19.
25. Schulz, D.L.; McBurney, H. Factors Which Influence Attendance at a Rural Australian Cardiac Rehabilitation Program. *Coronary Health Care* **2000**, *4*, 135–141, doi:10.1054/chec.2000.0086.
26. Chamosa, S.; Alarcón, J.A.; Dorronsoro, M.; Madruga, F.J.; Barrera, J.; Arrazola, X.; de la Cuesta, P.; Alkiza, M.-E.; Begiristain, J.M.; Carrera, I.; et al. Predictors of Enrollment in Cardiac Rehabilitation Programs in Spain. *J Cardiopulm Rehabil Prev* **2015**, *35*, 255–262, doi:10.1097/HCR.0000000000000126.
27. Haslam, C.; Cruwys, T.; Haslam, S.A.; Dingle, G.; Chang, M.X.-L. Groups 4 Health: Evidence That a Social-Identity Intervention That Builds and Strengthens Social Group Membership Improves Mental Health. *J Affect Disord* **2016**, *194*, 188–195, doi:10.1016/j.jad.2016.01.010.
28. Zambrano, J.; Celano, C.M.; Januzzi, J.L.; Massey, C.N.; Chung, W.; Millstein, R.A.; Huffman, J.C. Psychiatric and Psychological Interventions for Depression in Patients With Heart Disease: A Scoping Review. *J Am Heart Assoc* **2020**, *9*, doi:10.1161/JAHA.120.018686.
29. Derksen, F.; Bensing, J.; Lagro-Janssen, A. Effectiveness of Empathy in General Practice: A Systematic Review. *British Journal of General Practice* **2013**, *63*, e76–e84, doi:10.3399/BJGP13X660814.
30. Bouchard, K.; Brownrigg, J.; Quinlan, B.; Bilodeau, J.; Higdon, G.; Tulloch, H. Supporting the Health and Well-Being of Caregivers. *Journal of Cardiovascular Nursing* **2020**, *35*, 268–272, doi:10.1097/JCN.0000000000000678.