What Sustains Long-Term Adherence to Structured Physical Activity After a Cardiac Event?

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Purpose: Research addressing methods to sustain long-term adherence to physical activity among older adults is needed. This study investigated the motivations and supports deemed necessary to adhere to a community-based cardiac rehabilitation (CBCR) program by individuals with established coronary heart disease. Methods: Twenty-four long-term adherers (15 men, 9 women; age 67.7 ± 16.7 yr) took part in focus-group discussions. Results: Constant comparative analysis supported previous research in terms of the importance of referral procedures, social support, and knowledge of health benefits in influencing uptake and adherence to CBCR. Results also highlighted the routine of a structured class and task-, barrier-, and recovery-specific self-efficacy as necessary to sustain long-term adherence for this specific clinical group. Discussion: Older adults themselves provide rich information on how to successfully support their long-term adherence to structured exercise sessions. Further research into how to build these components into any exercise program is necessary.

Keywords: cardiac rehabilitation, exercise self-efficacy, motivation, community support

Cardiovascular disease is the most common cause of mortality and morbidity in the world, accounting for 30% of all causes of death (Yusuf, Reddy, Ounpuu, & Anand, 2001). In the case of individuals with existing coronary heart disease, evidence suggests that exercise capacity is the strongest predictor of mortality in comparison with other known cardiovascular risk factors (Myers et al., 2002). Individuals who have suffered a cardiac event are encouraged to undergo cardiac rehabilitation (CR), the purpose of which is to educate patients on the meaning of heart disease and associated risk factors and help them implement the changes necessary to reduce these risk factors and prevent secondary occurrence. CR consists of four phases, of which physical activity is a key component. The aim is to gradually build up the patients’ exercise capacity by educating them on the importance of physical activity (Phases I and II), encouraging them to attend supervised (generally hospital-based) exercise classes (Phase III), and helping them maintain...
the recommended physical activity levels long-term (Phase IV; Scottish Intercollegiate Guidelines Network, 2002).

Compared with usual care, patients who participate in exercise-based CR programs have been shown to significantly increase their physical activity levels (Oliveira, Riberio, & Gomes, 2008). However, research has revealed that only 12.2% of individuals who have suffered a cardiac event actually partake in Phase III CR (Suaya, Stason, Ades, Normand, & Shepherd, 2009). Referral by a medically trained individual (nurse, consultant, or general practitioner) has been reported as the strongest predictor of attendance (Barber, Stommel, Kroll, Holmes-Rovner, & McIntosh, 2001; Dolansky, Moore, & Visovsky, 2006; Jackson, Leclerc, Erskine, & Linden, 2005), but as few as 16% of those eligible for CR are actually referred (Barber et al., 2001). Factors affecting the decision to refer include the patient’s age, gender, race (Barber et al., 2001), specific cardiac event suffered, and health insurance status (Jackson et al., 2005). Research consistently highlights lower uptake and adherence of women in CR programs (Barber et al., 2001; Jackson et al., 2005; Suaya et al., 2009; Thornhill & Stevens, 1998). Factors affecting an individual patient’s decision to attend CR include distance to program venue (De Angelis, Bunker, & Schoo, 2008; Thornhill & Stevens, 1998), social support (Barber et al., 2001; De Angelis et al., 2008; Dolansky et al., 2006; Jackson et al., 2005), other commitments, lack of interest (De Angelis et al., 2008), dislike of group activities (Clark, Barbour, White, & MacIntyre, 2004; Tod, Lacey, & McNeill, 2002), cost, and a lack of understanding of what CR entails and of belief in its benefits (Dolansky et al., 2006).

For those who do attend Phase III CR, evidence suggests that physical activity levels gradually decline after program completion (Bethell, Turner, & Mullee, 1999; Bock, Carmona-Barros, Esler, & Tilkemeier, 2003; Hughes, Mutrie, & MacIntyre, 2007; Moore et al., 2006), with as few as 28% maintaining recommended levels of physical activity at 12 months (Moore et al., 2006). These statistics on decline and dropout are higher than for the normal population (Dishman, 1994), and limited information on long-term adherence to exercise programs among older adults (Conn, Valentine, & Cooper, 2002) restricts further comparison.

Research addressing adherence to physical activity after Phase III CR has revealed that engaging in one-on-one exercise consultations (decisional balance, goal setting, relapse prevention, problem-solving barriers, exploration of activity options, and social support; Hughes et al., 2007), taking part in group counseling and behavior-modification sessions (self-efficacy enhancement, problem-solving skills, and relapse-prevention strategies; Moore et al., 2006), use of physical activity diaries (Arrigo, Brunner-LaRocca, Lefkovits, Pfisterer, & Hoffmann, 2008), and devising an action plan for physical activity performance (Sniehotta et al., 2005) positively affect levels of physical activity in comparison with usual care over a 6- to 12-month period after Phase III CR.

A key concept in these interventions is self-efficacy. Self-efficacy is part of social cognitive theory (Bandura, 1986) and suggests that social, cognitive, and behavioral factors play an important part in an individual’s choice to adhere to, or to avoid, exercise. In social cognitive theory, self-efficacy is described as an individual’s belief in his or her ability to perform a particular behavior in a variety of circumstances (Bandura, 1997). Self-efficacy beliefs are highly correlated with physical activity participation (Focht, Knapp, Gavin, Raedeke, & Hickner, 2007),
with positive affect postexercise when a state of flow (challenge-meeting ability) is achieved (McAuley, Jerome, Marquez, Elavsky, & Blissmer, 2003) and with positive psychological well-being in older adults (Netz, Wu, Becker, & Tenenbaum, 2005).

Bandura believed that to understand the evolving nature of behavior change the individual has to master a number of different tasks requiring different types of self-efficacy (Bandura, 1997); that is, although high self-efficacy in relation to exercise performance may motivate an individual to commence a physical activity program, it may not result in his or her adhering to the program. Hence, more recent studies have examined specific types of exercise self-efficacy and support the necessity of having multiple types to achieve sustained adherence (Rodgers, Murray, Courneya, Bell, & Harber, 2009; Rodgers & Sullivan, 2001). Scholz, Sniehotta, and Schwarzer (2005) studied stage-specific self-efficacy beliefs in a sample of individuals during and 2 and 4 months after Phase III CR. They found that task self-efficacy was initially needed to form an intention to act or commence the new behavior, but maintenance self-efficacy, also referred to as self-regulatory (Bandura, 1997; Woodgate, Brawley, & Weston, 2005) or barrier self-efficacy (Blanchard et al., 2007), was required to continue to perform the behavior under challenging conditions, and finally recovery self-efficacy was needed to enable the individual to resume the behavior should the maintenance of the behavior change or be interrupted. This requirement of different types of self-efficacy for successful adherence to physical activity is supported in both the cardiac (Blanchard et al., 2007; Luszczynska & Sutton, 2006) and general older adult population (Rodgers et al., 2009; Stigglebout, Hopman-Rock, Crone, Lechner, & van Mechelen, 2006). Similarly, Umstattd and Hallam (2007) found that barrier self-efficacy was useful only when explaining neophyte exercise experiences in an older adult population; it had limited predictive effect on explaining exercise maintenance. Thow, Rafferty, and Kelly (2008) interviewed long-term adherers (≥5 years) to a Phase IV community-based CR (CBCR) program to gain insight into factors that helped sustain adherence. Both quantitative (EMI-2) and qualitative (focus groups) methods were used, and results revealed that ill-health avoidance, positive health outcomes, enjoyment, and social factors were key motivations for continued participation. A limitation to this study was the small sample size (two focus groups with 5 men in one and 4 women in the other), and self-efficacy was not mentioned as an influential factor. The purpose of the current study was to build on Thow et al.’s work by developing a more in-depth understanding of the key correlates that explain medium- to long-term adherence to community-based physical activity after a cardiac event. This information is important because it will help advise strategies to increase the number of people with established coronary heart disease who engage in regular health-enhancing physical activity.

**Methods**

A Phase IV CBCR program running since 2006 with a weekly attendance of approximately 80 adults (age 50–85 years, 70% male) with established coronary heart disease was the setting for this study. All participants were referred from one of three local Phase III hospital-based CR programs. The program is predominantly exercise based and is run by sport-science and health professionals in a community setting. Classes are 1 hr, 15 min in length and run five times per week.
Ethical Considerations

All participants of a Phase IV CBCR program were given a plain-language statement outlining the study, the requirements for inclusion, and expectations of them should they opt to participate. Once selected for inclusion, individuals completed an informed-consent form allowing the researchers access to their demographic and medical data (age, marital status, medical history) held by the program staff. All focus-group sessions were taped and transcribed. To protect confidentiality and encourage participants to be frank and critical in their comments, no individual identifiers were included in the transcripts; each participant was allocated a code and referred to as such in the transcriptions. Focus-group tapes and transcriptions were stored securely and accessible only to the researchers. The study protocol was approved by the research ethics committee of Dublin City University.

Participant Selection

Inclusion criteria included regular attendance (averaging two sessions/week) at the program for the previous 6 months or longer with a lapse no greater than 1 month within that period. Six months was chosen as minimum adherence because it is accepted as the time frame for behavior change to be regulated (Prochaska & DiClemente, 1983). A recruitment letter was sent to all potential participants explaining the purpose of the research study and the set dates for five focus-group sessions. An opportunity was provided to ask questions and indicate interest. Once ethical procedures—informed consent—were completed, participants were allocated to one of five scheduled focus-group sessions based on their availability and gender. At least 4 participants were allocated per group, based on the recommendations of Kitzinger (1995). Groups were gender specific to minimize the potential for sensitivities and, therefore, a reluctance to share experiences and opinions, and because of the large differential in the numbers in the full class (it is mainly made up of men) we felt it necessary to specifically target women for recruitment purposes. No other randomization method was deemed necessary because all willing participants were allocated to a group.

Focus Groups

Focus groups were the qualitative method chosen because they generate rich data by capitalizing on interparticipant communication (Kitzinger, 1995). Five focus-group sessions were held, three with men and two with women, with 4–7 participants in each.

The moderator introduced each session and led the participants through a series of 10 questions developed using guidelines by Krueger (1998), for example, “What influenced you to join the program?” and “List five positive things about the program in order of importance” (participants were given the chance to write these down and then discuss as a group). Although each focus group followed the same set of questions, to ensure that the conversation flowed participants were given the opportunity to stray from the particular question being asked as long as the conversation remained within the bounds of the topic of the research. This was to ensure that the participants were given the opportunity to explore their opinions and ideas. Notes from the focus-group sessions were recorded manually.
by an assistant moderator on a predesigned data-recording sheet and via an audio tape recorder. Participant verification was checked by providing a summary of each group’s discussion at the end of the focus group to verify that the researcher was providing a correct summary of the discussion according to the participants.

Data Analysis

The moderator and assistant met directly after each focus-group session to debrief and discuss and capture initial thoughts. Each focus group was transcribed verbatim before the next one commenced. Analysis of the transcription was conducted manually, first by comparing it with the assistant moderator’s notes to fill in inaudible phrases or gaps in the tapes, followed by the constant comparative method to analyze the data. This involved finding, highlighting, and comparing emerging themes from focus groups.

For theme identification, the researcher looked for patterns, themes, concerns, or suggestions that were posed repeatedly by the focus-group participants. Data for each theme were then grouped together, read repeatedly, reanalyzed, and, if necessary, broken down into subordinate themes to better reflect the insight derived from the data provided by the participants. These themes included sought or expected information, as well as emergent themes that were unexpected and revealed insights.

All transcripts plus the complete list of themes and subthemes were then passed to a colleague to assess and provide feedback on analysis. Discussion took place to ensure that all data were linked to the appropriate theme, and new themes were developed where necessary. When all data had been coded and themed, the researcher chose key quotations (denoted by participant gender and length of adherence in the Results section) from each theme and linked them with an explanatory narrative to describe key findings.

Results

Participant Details

Twenty-four participants, 15 men (mean age 65.1 ± 14 years) and 9 women (mean age 72 ± 9 years), all White, took part in the study. Average program adherence was 20 months (± 10 months), and distance from the venue ranged from 2.4 to 31.2 km. Twenty of the participants were married, 1 was separated, 2 were single, and 1 was widowed. All except 1 man were retired. They had experienced a range of single to multiple cardiac events.

Themes

Data from the focus groups were filed under two headings: factors influencing uptake and adherence (Table 1) and strategies to increase future uptake and adherence (Table 2).

Factors Influencing Uptake and Adherence. Instrumental and emotional social support proved to be influential in both uptake and adherence. This support was provided by health professionals, family and friends, fellow participants, and program staff.
Table 1  Factors Influencing Uptake and Adherence

<table>
<thead>
<tr>
<th>Key themes</th>
<th>Subordinate themes</th>
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<tbody>
<tr>
<td>Social support</td>
<td>Instrumental (health professionals), emotional (family and friends, fellow participants, community-based cardiac rehabilitation staff)</td>
</tr>
<tr>
<td>Structured class</td>
<td>Novel exercises, specialist staff, routine, purpose</td>
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<tr>
<td>Health</td>
<td>Belief in health benefits</td>
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<td>Self-efficacy</td>
<td>Task, barrier, recovery</td>
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Table 2  Strategies to Increase Future Uptake and Adherence

<table>
<thead>
<tr>
<th>Key themes</th>
<th>Subordinate themes</th>
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<tbody>
<tr>
<td>Recruitment methods</td>
<td>Existing participants, health professionals, program staff, quick transfer from Phase III</td>
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<tr>
<td>Support</td>
<td>Staff:participant ratio, group meetings</td>
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<tr>
<td>Motivation</td>
<td>Challenge and variety, goal setting, fitness testing and feedback, gender divide, reinforce health benefits</td>
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Most participants stated that they had been encouraged to progress to the Phase IV CBCR program by Phase III health professionals. This support was instrumental in nature, by outlining CBCR location, time, and enrollment procedures: “In [the hospital] they had a poster up stating that [CBCR] was commencing at that time. . . They encouraged us to come and also to feed back to them” (M3, 18 months).

Both emotional and instrumental support from family and friends were important factors for many participants. Although some were made aware of the program by those closest to them, for others it was the extra encouragement that spurred them on. One woman revealed how a family member was of paramount importance to her attendance: “My son had heard about it before I did and he said when you come out, you should look it up. And I’ve no excuse, he drops me over” (F7, 10 months).

Emotional support received from fellow participants and program staff was strongly emphasized. Although participants referred to the company and fun aspect they provided, it is clear that support goes beyond what one might experience from an exercise class open to the whole public. They specified that the class provides an opportunity to exercise with people who “are in the same boat” (F2, 19 months), and this provided an additional support: “Their eyes don’t glaze over if you talk about your problems because they’ve had the same problems” (F4, 16 months). Another woman explained how the program staff made her feel at ease: “I found the team was so nice and they made you so welcome” (F7, 10 months).

The various aspects and components of the CBCR class emerged as a theme that positively affected adherence. Participants revealed that the exercises carried out in the class were novel and not ones they would independently perform—“You do exercises that you wouldn’t do if you weren’t in the class scenario” (M12, 19 months)—which provided a new dimension to their physical activity: “I walk a
lot but I find these exercises stimulating” (M3, 18 months). They also referred to
the safety benefits of exercising in the presence of specialist staff: “You feel safe,
particularly at the beginning. . . . You could take it a bit further because you knew
there were people there who knew what they were doing” (M9, 13 months).

Participants explained how CBCR had become a part of their routine and they
were committed to attending—“Sets target to keep fit at set hours. . . . On Tuesday
and Thursday I never make any other commitments” (M3, 18 months)—and pro-
vided a sense of purpose as 1 male participant explained,

I think in a curious way, [it gives] a certain sense of identity. . . . Sometimes,
whatever we work at can identify us, give us a sort of a place in society. [Going
to CBCR], I had a purpose and I think psychologically it was good for me.”
(M15, 19 months)

This sentiment was backed up by a female participant who stated, “I love getting up
in the morning and knowing where I’m going and that it’s here” (F9, 26 months).

An understanding of the health benefits of continuing to adhere to physical
activity was apparent. Participants viewed their continued participation as “an
insurance policy to make sure we’re not back in the stage that we just left . . . and a
very important safeguard to keep us on the straight and narrow” (M14, 16 months).
The concept of their health being in their own hands was evident: “I wanted to do it
myself. . . . It’s terrible saying ‘cardiac cripple’ but not to become one. You needed
to get out there and start your life again” (F1, 30 months).

Three distinct types of self-efficacy were prominent in helping the participants
sustain their exercise program. First, task self-efficacy, or the participants’ ability
to successfully perform the exercises, had a very positive effect: “It shows you the
possibilities of what you can do after a heart attack, you know, it builds up your
confidence” (M11, 10 months). Second, barrier self-efficacy was demonstrated. Dis-

tance from the program venue and heavy traffic were expressed as inconveniences,
and although they affected the number of classes attended, they did not lead to
nonparticipation—for example, “I’ve often come when I’ve had to go somewhere.
I just go home and get ready and get cleaned up and then go” (M8, 22 months).

Third, participants presented recovery self-efficacy. Most had experienced lapses
in adherence, predominantly because of holidays, illness, and injury, but once the
reason for the lapse ceased, they immediately returned to the program.

**Strategies to Increase Future Uptake and Adherence.** The need to address
methods of recruitment to the Phase IV CBCR program the participants were
engaged in was strongly conveyed. It was suggested that existing participants
could be used to encourage new people to join the program because they were in
the best position to convey the reality of the classes: “[It would help if they had
the opportunity] to interact with us after we finished [exercising], to get feedback
from ourselves who are doing it” (M13, 30 months).

Health professionals were also suggested as a means to increase awareness of
the program: “I’ll tell you frankly, too many people don’t know these things are
available. . . . Maybe doing circulars to doctors or GPs, telling them what you’re
doing and I think you’d get an awful lot more people to come” (M3, 18 months).

Other suggestions included CBCR staff visiting Phase III CR classes or incorpo-
rating a visit to a Phase IV CBCR class into the Phase III CR program because it
was believed that this might help reduce some initial anxiety: “It was very difficult to assimilate in my own mind, what the hell we were going to do. . . . You went away and you were a bit worried because you thought, ‘I might not be able to do this’” (M3, 18 months). The need to transfer quickly from Phase III to Phase IV was also highlighted: “They’re after doing their 10 weeks [in Phase III CR] and they are in their stride a little bit and if they came in then . . . but if they come in raw . . . .” (F3, 30 months).

The importance of maintaining and increasing the initial support to newcomers was highlighted. It was felt that because of the increased participant numbers the initial support had declined:

There was a time when people would come in and you’d be grouped together for the first week, to be encouraged and that. And they would have lots of students around them showing them what to do. . . . That’s not necessarily the case now. (F2, 19 months)

Another suggestion was to hold regular group meetings for newcomers: “I say every month or something like that there should be a meeting whereby they should be spoken to, asked how they feel” (M8, 22 months).

Participants were strong in the opinion that more could be done to improve participants’ motivation, and in particular they wanted to see an increase in the challenge and variety of the exercises: “I find that the stuff we’re doing every week, it’s all repetition really. . . . You could lose motivation doing it” (M8, 22 months). In addition to changes in the exercises performed, goal setting, fitness tests, and feedback were stated as motivational tools that could be better used for newcomers—“I would certainly for beginners after a month or so . . . put in a fitness assessment” (M8, 22 months)—and long-term adherers to inform them of their progress: “It would be a good check wouldn’t it [fitness test], once a year even, or 6 months” (M6, 18 months), “You know you’re doing what you’re doing but are you getting any better?” (F2, 19 months). The only concept to emerge solely from male participants was that of a gender division in the class, “Well I noticed with the advanced class, you never get any women in it because I think women are intimidated” (M7, 22 months). Reinforcement of the benefits of maintaining physical activity was also noted as a strategy to maintain or increase motivation.

**Discussion**

Consistent with research focusing on Phase III CR, this study found a number of similar factors influencing uptake and long-term adherence to Phase IV CBCR. The predominant factor influencing uptake in Phase IV CBCR was referral to the program by a health professional; this is similar to Phase III and supports previous research (Barber et al., 2001; Dolansky et al., 2006; Jackson et al., 2005). It also stresses the importance of good links between community and hospital settings to ensure speedy and smooth transition from Phase III to Phase IV.

Similar to Phase III, support from family and friends was perceived as a key motivator in terms of both uptake and adherence (Barber et al., 2001; De Angelis et al., 2008; Dolansky et al., 2006; Jackson et al., 2005), and the support of fellow participants with a common medical history was paramount to continued adher-
ence (Clark et al., 2004; Jones, Greenfield, & Jolly, 2009; Thow et al., 2008). In addition, both Phase III and Phase IV participants demonstrated knowledge of the benefits of remaining physically active (Dolansky et al., 2006; Thow et al., 2008; Wyer, Earll, Joseph, & Harrison, 2001) and viewed their participation as a method of controlling their health and avoiding the pitfalls that led to their cardiac event in the first place (Clark et al., 2004; Thow et al., 2008; Wyer et al., 2001).

The current study develops our knowledge of adherence further by highlighting having a structured class and enhancing self-efficacy as essential to long-term adherence to Phase IV CBCR. Elements of the structured class, including the range of exercises taught and the presence of specialized staff, were important for sustaining adherence, which supports findings from Phase III (Thornhill & Stevens, 1998). Many viewed the classes as part of their weekly routine and were committed to attending each week because it provided them with a sense of purpose. This was particularly evident among the retired individuals—some stated that it gave them a sense of identity. This is a novel finding, one that highlights the role of habit or routine as an important factor in helping individuals adhere to a structured exercise program long term by making it a component part of their everyday lives.

The current study also revealed task, barrier, and recovery self-efficacy as essential for sustained adherence. This is an important finding because it enforces the need for multiple types of self-efficacy to sustain behavior change. Task self-efficacy has been shown to be positively associated with uptake and short-term adherence to physical activity after a cardiac event (Scholz et al., 2005), provided the program does not progress too quickly (Rodgers et al., 2009). However, Rodgers and Sullivan (2001) found that the presence of high task self-efficacy did not relate to long-term adherence, and indeed it was reported in nonexercisers. Task self-efficacy was reported as important by the adherers in the current study. They felt it provided them with the necessary belief in their ability to carry out the prescribed exercises of the program, particularly when the exercises were new or challenging.

The case for barrier (or maintenance) self-efficacy is less clear, and although strong links with physical activity have been reported in the short term—that is, up to 2 months post-CR (Blanchard et al., 2007; Blanchard, Rodgers, Courneya, Daub, & Knapik, 2002; Luszczynska & Sutton, 2006)—results for long-term adherence conflict. Blanchard et al. (2007, 2002) reported a significant decline in the relationship from 2 to 12 months post-CR, whereas other studies have revealed strong correlations up to 8 months post-CR (Luszczynska & Sutton, 2006; Scholz et al., 2005). In a nonclinical population of older adults, a multivariate analysis revealed no relationship between barrier self-efficacy and exercise maintenance (Umstattd et al., 2007). The current study supports the necessity of barrier self-efficacy for long-term adherence and the importance of having coping strategies in place to deal with barriers as they arise.

More united support appears to be available for recovery self-efficacy, which has been linked to adherence in both the cardiac (Luszczynska & Sutton, 2006; Scholz et al., 2005) and general older adult population (Stigglebout et al., 2006). As would be expected, lapses will occur in long-term adherence to physical activity for a variety of reasons (e.g., illness, injury); the importance of recovery self-efficacy is paramount.

The inconsistency of instruments used to measure self-efficacy, plus the multiconceptualization of the construct itself, makes it difficult to ascertain a definitive
view of its true relationship to long-term adherence to physical activity after a cardiac event. The current findings inform us that all types of self-efficacy must be present at all times during the behavior-change continuum to allow specific types to be used to their full potential when the need arises. Future research must evaluate this further, particularly the notion of a temporal concept—that is, that some forms of self-efficacy are more important than others at different times depending on one’s location on the behavior-change continuum.

Strategies to increase future uptake and adherence to Phase IV CBCR focused on recruitment methods, support, and motivation. Complementing previous findings (Clark et al., 2004; Thornhill & Stevens, 1998), suggestions included better marketing of the program and a more in-depth introduction to Phase IV CBCR during the Phase III program. The use of current class members to help recruit new participants has also been previously suggested (Clark et al., 2004; De Angelis et al., 2008). Peer support was recommended by the participants, who would fulfill this role, which suggests that they would be willing to cooperate, although the level of commitment required would need to be addressed. This is a novel idea, and future research needs to explore the impact of a peer-led intervention on adherence to Phase IV CBCR. It may also be possible to incorporate this into the monthly group-support meetings that were also suggested. A desire to increase motivation by methods including more challenging exercises and feedback strengthens the finding that these individuals are motivated by a desire to improve their physical health.

**Conclusion**

It is apparent that long-term adherers to a CBCR program share the following characteristics: appreciation of the various aspects of a Phase IV CBCR program, awareness of their medical condition and the benefits of maintaining physical activity and establishing a routine, and strong task, barrier, and recovery self-efficacy. To increase the number of people successfully sustaining physical activity levels after a cardiac event, we need to work with them to develop these attributes. In an effort to achieve this, the following are recommended:

- Development of task, barrier, and recovery exercise self-efficacy in individuals after a cardiac event
- Introduction of educational components into Phase IV CBCR programs to increase awareness of the importance of maintaining physical activity after a cardiac event
- Phase IV CBCR providers’ establishment of a closer working relationship with Phase III CR providers to ease the transition from one to the other
- Development of a routine, a purpose among participants, which helps them get into the habit of attending the class and building exercise into their daily lives
- Training of current long-term adherers to become peer mentors in the program
Limitations

All participants were from the same Phase IV CBCR program; only one program was assessed. Strategies for increasing uptake and adherence are from the perspective of existing long-term adherers, who may not understand the barriers faced by those who do not attend. Finally, participants were aware that results of the study would be seen by the program organizers, and this may have inhibited responses (even though they were notified that all data would be kept anonymous).

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References


