EVALUATING DIGITAL PREHABILITATION IN CARDIAC REHABILITATION: IMPACT ON PATIENT RECALL OF EXERCISE GUIDELINES AND PROGRAMME FAMILIARISATION

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ABSTRACT

BACKGROUND/AIMS: The efficacy of UK cardiac rehabilitation to improve patient outcomes has been questioned due to many programmes not prescribing a full dose of exercise as recommended by the Association of Chartered Physiotherapists in Cardiac rehabilitation. The aim of this study was to 1) evaluate whether providing digital prehabilitation to patients prescribed a lower exercise dose than Association of Chartered Physiotherapists in Cardiac Rehabilitation guidelines recommend enabled them to recall the exercise targets, and 2) to determine whether digital prehabilitation helped patients feel more familiar and prepared for participation in the cardiac rehabilitation programme.

METHODS: Fifty-five patients (males n = 44, females n = 11, 75 ± 10 yrs) were initially recruited to the study. Fifty-one patients were provided with digital prehabilitation via an online weblink 7 days prior to starting their phase III cardiac rehabilitation programme. Thirty-three patients (males n = 21, females n = 5) engaged with the video and were given an online survey to complete relating to the digital prehabilitation, and twenty-three patients responded.

RESULTS: Four (17.4%), eleven (47.8%), four (17.4%), two (8.7%) and two (8.7%) patients felt extremely, very, somewhat, not so and not at all confident that they were meeting the prescribed exercise targets for intensity and duration. Three (13%) recalled the rating of perceived exertion exercise intensity target range (11-14) correctly and for the gym-based cardiac rehabilitation exercise programme, of the 16 patients who responded, none (100%) recalled the full rating of perceived exertion range (14-16) correctly. Eight (34.8%) patients recalled the minimum exercise duration (20 mins) target correctly.

CONCLUSIONS: Despite most patients feeling confident about their understanding of exercise targets, the actual recall of rating of perceived exertion and exercise duration targets was limited, indicating a gap between perceived knowledge and recall. This familiarisation

approach has potential but requires enhancement to improve the patients' recall of exercise dose.

KEYWORDS: Cardiac rehabilitation, digital healthcare, prehabilitation, exercise guidelines

INTRODUCTION

Cardiac rehabilitation is a multi-faceted intervention that aims to improve the health of those diagnosed with cardiovascular disease and typically includes five core components: health behaviour change and education, lifestyle risk factor management, psychosocial health, medical risk management and long-term strategies (Taylor et al., 2022; BACPR, 2023). Lifestyle risk factor management includes physical activity and exercise training, which supports improvements in aerobic fitness, cardiovascular function and inflammatory profiles (Lang et al., 2024), and can reduce the risk of a recurrent cardiovascular event (Winnige et al., 2021) and potentially reduce mortality (Dibben et al., 2021). Exercise-based cardiac rehabilitation forms a key component of cardiac rehabilitation, with UK guidelines stating patients should exercise three times weekly for eight weeks, totalling 24 sessions to achieve improvements in aerobic fitness (ACPICR, 2023). Each session should include a minimum of 20 minutes of cardiovascular exercise at an intensity of 11-14 on the Borg Rating of Perceived Exertion Scale (40-70% heart rate reserve) (ACPICR, 2023).

UK cardiac rehabilitation programmes have previously been reported to lead to only minimal increases in aerobic fitness compared to other countries, with an insufficient exercise dose attributed to this outcome (Sandercock et al., 2013). Various UK trials and studies have failed to prescribe the previously recommended 16 exercise sessions (now 24) and have inadequately reported the prescribed and achieved exercise dose, nor how the dose changes over time (West et al., 2012; Sandercock et al., 2013; Alhmodhy et al., 2016). Recent data

corroborates this, suggesting that exercise dose fidelity standards are not being met (Khushhal et al., 2019; Ibeggazene et al., 2020; Moore et al., 2022) meaning improvements in aerobic fitness may be difficult to achieve (Powell et al., 2018). Therefore, approaches are needed to address this, whilst also monitoring both initial prescribed dose and progressive overload to enhance consistency and more favourable patient and service outcomes.

The inability of cardiac rehabilitation services to prescribe patients the recommended 24 supervised exercise sessions may stem from long waiting lists, resource limitations and staff shortages (Catsis et al., 2023), particularly following the COVID-19 pandemic with 27.3% of the 110 UK services not replacing lost staff (NACR, 2022). This is not something that can be easily restored, especially in settings with constrained resources, so complementary approaches need exploring to empower patients to understand and monitor the exercise dose, so they may be more likely to engage in unsupervised sessions.

Incorporating digital technologies into cardiac rehabilitation may address challenges such as the inability of many UK services to prescribe the recommended exercise dose. It could enhance care delivery and improve patient engagement (Golbus et al., 2023), with a recent systematic review concluding that digital technologies have the potential to increase access and participation in cardiac rehabilitation (Wongvibulsin et al.,2021). Most focus has been placed on facilitating uptake using home-based digital programmes, rather than on the exercise training component, and only three of the included studies were UK-based. Since adherence to programme fidelity is a key challenge, replacing traditional face-to-face exercise delivery with digital technologies raises concerns about whether patients will meet exercise intensity and duration targets (Jarallah et al., 2025). Additionally, capturing these metrics

digitally may pose logistical challenges for delivery staff (Dalal et al., 2021). Thus, adherence to the Association of Chartered Physiotherapists in Cardiac Rehabilitation guidelines remains uncertain in this context.

Integrating digital technologies to complement face-to-face delivery may help patients adhere to prescribed exercise targets, particularly where services are unable to prescribe 24 sessions. Given these limitations, there is a clear need to investigate whether digital prehabilitation can strengthen patients' understanding of exercise guidelines and support self-monitoring, thereby enhancing the effectiveness of cardiac rehabilitation programmes in routine practice. To address this gap, this study focused on patients' ability to recall intensity and duration targets, both essential for programme fidelity (Harwood et al., 2021). The aims of this study were: 1) to evaluate whether providing digital prehabilitation to patients prescribed a lower exercise dose than Association of Chartered Physiotherapists in Cardiac Rehabilitation guidelines recommend enabled them to recall the exercise targets, and 2) to determine whether digital prehabilitation helped patients feel more familiar and prepared for participation in the cardiac rehabilitation programme.

METHODS

RESEARCH DESIGN

A cross-sectional descriptive survey design was deliberately adopted as an exploratory service evaluation, aiming to assess patients' understanding of the cardiac rehabilitation programme with particular emphasis on their ability to recall the recommended dose i.e., exercise intensity and duration targets. The survey was web-based so patients needed to have access to the internet to engage with the digital prehabilitation. By emailing both the link to

watch the digital prehabilitation video and the survey, a single mode of communication with the research team was maintained.

PATIENTS AND CONSENT

Ethical approval was granted by Wrexham University (ID: 511) for this study and the project was registered locally as a service evaluation/audit on the clinical audit database (ID: 933). Fifty-five patients who were referred to cardiac rehabilitation (males: n = 44, females: n = 11) were recruited at local out-patient clinics in Wrexham and Flintshire, North Wales, UK prior to starting their exercise-based cardiac rehabilitation programme. Patients were excluded from the study if they were (1) under 18 years of age; (2) not fluent in English or Welsh; (3) without access to the internet or a computer/mobile device; and (4) not planning to attend the supervised exercise-based cardiac rehabilitation programme (Nkonde-Price et al., 2022; Gibson et al., 2023). Written informed consent was obtained by a member of the research team prior to enrolling patients onto the study.

DIGITAL PREHABILIATION

The purpose of the digital prehabilitation was to support patients' familiarity with the cardiac rehabilitation programme by providing preparatory education, rather than exercise, prior to commencing cardiac rehabilitation. A total of 10 videos were created - five in English and five in Welsh - to provide access to the bilingual community. By implementing digital prehabilitation in this context, the study addresses a gap in delivering tailored cardiac rehabilitation interventions reflective of regional and linguistic diversity, thereby improving accessibility for underrepresented populations. Each of the five videos was tailored to the out-patient leisure centre where patients were scheduled to attend their exercise-based cardiac rehabilitation classes and to the type of exercise programme (gym-based or circuit-based), as

the exercise guidelines differed between these formats. Each patient received one video that was specific to the leisure centre they were attending. The video outlined the following:

1) Venue location/arrival

2) Frequency of exercise sessions

3) Exercise set-up including pre- and post-exercise assessment checks

4) Cardiovascular/active recovery activity during the gym/circuit

5) Types of cardiovascular and active recovery exercises

6) How to perform exercises correctly with instructions on the number of repetitions to be performed for active recovery exercises

7) How exercise is up titrated

8) Exercise intensity and duration guidelines patients are to adhere to during their sessions as recommended by the Association of Chartered Physiotherapists in Cardiac Rehabilitation (11-14 rating of perceived exertion for a minimum for 20-minutes) (ACPICR, 2023)

9) A visual of the 6-20 Borg Rating of Perceived Exertion Scale instructing patients on how they can monitor their own exercise effort level

10) An overview of the education sessions to be delivered alongside their exercise classes, including the topics to be covered, in line with the British Association of Cardiovascular Prevention and Rehabilitation recommendations (BACPR, 2023).

The videos were developed in collaboration with the cardiac rehabilitation team, who reviewed the full set prior to patient use and provided feedback that informed subsequent edits to ensure clinical accuracy, clarity, and relevance.

One week prior to starting cardiac rehabilitation, patients were emailed a link to watch the video relevant to their scheduled venue. Patients were then asked to confirm via email they had received the link and had watched the video.

EXERCISE-BAED CARDIAC REHABILIATION PROGRAMME

Patients were prescribed to attend exercise-based cardiac rehabilitation classes once weekly for eight weeks. This is below the recommended exercise dose of three times weekly for eight-weeks (ACPICR, 2023) due to service constraints, including staffing shortages and limited capacity for supervised sessions. Patients could choose if they wanted to attend a gym-based or circuit-based exercise programme based on personal preference and their pre-clinical exercise assessment results. Each cardiac rehabilitation exercise session consisted of a structured warm-up, main conditioning component and cool-down, in line with established guidelines (ACPICR, 2023; BACPR, 2023). For gym-based programmes where resistance training is incorporated, patients are asked to complete 10 repetitions at 30-40% and 50-60% of the patients initial 1-repition maximum for upper and lower body exercises respectively (ACPICR, 2023). Some patients were also provided with a home exercise booklet, which has been reported to enhance engagement by overcoming some barriers to exercise (Purcell et al., 2023).

SURVEY

An 18-question bilingual (English and Welsh) electronic survey was used to gather patient feedback on digital prehabilitation. The survey was created by the research team and piloted with the cardiac rehabilitation team, as well as a convenience sample of patients familiar to the service, prior to distribution to the study sample to ensure clarity, relevance and face validity (Collins, 2003). It was separated into 5 sections: Overall Usefulness, Exercise During Cardiac Rehabilitation Classes, Exercise in Leisure Time, Overall Exercise, and Overall Likes and Dislikes and was devised using JISC (Version 2, Bristol Online Surveys). Patients

were sent the electronic survey via email after completing half of their exercise-based cardiac rehabilitation programme (4 sessions). By this stage, patients are expected to be consistently exercising within their prescribed target heart rate range. Accurate recall at this point suggests appropriate exercise intensity, which is critical for eliciting improvements in aerobic fitness (Taylor et al., 2019). Patient responses were collected through multiple-choice questions, 5-point Likert scales (extremely useful – not at all useful; extremely confident – not at all confident) and open text responses, where patients were asked to recall the exercise intensity and duration targets as recommended, based on if they were completing a gym or circuit-based cardiac rehabilitation exercise programme. Additional details on the survey questions can be found in Supplemental Table 1.

DATA ANALYSIS

All data were analysed using descriptive statistics. Frequencies and percentages were calculated for categorical variables. Means and standard deviations (SD) were computed for numerical data where applicable. Due to the small sample size, no inferential statistical tests were performed to compare subgroups. All data were analysed using SPSS for Windows version 26 (IBM, New York, USA).

RESULTS

PATIENT RESPONSE AND DROP OUT RATE

Sixteen patients completed a gym-based programme and seven completed a circuit-based programme. See table 1 for patient characteristics. Four patients were withdrawn from the study prior to receiving the digital prehabilitation because they began cardiac rehabilitation before the digital video was sent. A further eighteen patients were withdrawn or withdrew from the study for the following reasons: did not attend supervised exercise-based cardiac

rehabilitation or dropped out of the cardiac rehabilitation programme (n = 8), did not watch the digital prehabilitation video (n = 7), switched exercise classes (n = 1), or withdrew themselves (n = 2). The survey was sent out to 33 patients, with 23 responses being received (69.7% response rate).

[TABLE 1 HERE]

OVERALL USEFULNESS

Eight (34.8%), eleven (47.8%) and four (17.4%) patients found the digital video extremely, very and somewhat useful.

EXERCISE DURING FORMAL CARDIAC REHABILIATION EXERCISE CLASSES

USEFULNESS ON EXERCISING CORRECTLY

Ten (43.5%), eight (34.8%), four (17.4%), and one (4.3%) patients found the digital prehabilitation extremely, very, somewhat and not so useful at providing information on exercising correctly during cardiac rehabilitation exercise classes.

CONFIDENCE and RECALL

For responses on confidence in exercising correctly and meeting the desired exercise targets, along with recall responses, see Table 2 and Figures 1a-1c.

TABLE 2 HERE

[FIGURES 1A-1C HERE]

EXERCISE DURING LEISURE TIME

Fifteen patients (65.2%) answered the question relating to exercise during leisure time while the remaining eight patients (34.8%) skipped the question as they indicated they had not received the home exercise booklet (Table 2).

OVERALL EXERCISE

Six (26.2%), eleven (47.8%), five (21.7%) and one (4.3%) patients found the video extremely, very, somewhat and not at all useful in providing information on carrying out correct exercise technique during and outside of formal cardiac rehabilitation exercise classes (Table 2).

DISCUSSION

This exploratory service evaluation set out to examine whether digital prehabilitation could strengthen patients' recall of exercise intensity and duration targets, and whether it helped them feel more familiar and prepared for participation in the cardiac rehabilitation programme. As an exploratory study, the findings are preliminary, but they provide useful insights into feasibility, patient confidence, and challenges with exercise guideline recall. Overall, while most patients reported that the videos were useful and felt confident about exercising correctly, actual recall of the recommended intensity and duration targets was poor, particularly in the gym-based programme. This suggests that digital prehabilitation may improve familiarity and confidence but was less effective in supporting accurate recall of exercise guidelines. In relation to the first aim, digital prehabilitation was not effective in enabling patients to recall exercise guidelines, as the majority of patients in this study (87% and 100% for overall and gym-based programmes respectively) could not recall the full exercise intensity guidelines correctly, and 62.5% of patients were not able to recall the exercise duration guidelines correctly (20 minutes minimum).

Digitising aspects of cardiac rehabilitation can be a useful mechanism for delivery staff who are not able to prescribe a full dose of exercise recommended by Association of Chartered

Physiotherapists in Cardiac Rehabilitation due to staffing and waiting list limitations (NACR, 2022; Catsis et al., 2023), or where the staff-to-patient ratio makes it unrealistic to monitor all patients throughout the sessions. By augmenting traditional supervised cardiac rehabilitation with digital prehabilitation, it could help ensure patients are educated on the exercise intensity and duration guidelines and better equipped to self-monitor, potentially supporting adherence both during and outside of formal sessions. This may help ensure that all exercise sessions are performed in line with the following: minimum 20 minutes at 11-14 rating of perceived exertion (40-70% heart rate reserve) (ACPICR, 2023), while also encouraging independent regulation of effort. However, it is likely that because most patients could not recall the exercise intensity and duration guidelines correctly, exercise intensity and duration fidelity was not achieved.

Although studies investigating digital technologies in cardiac rehabilitation have primarily focused on fully remote digital services, there is limited evidence assessing their role in complementing in-person delivery, particularly in improving exercise fidelity. Most related studies do not evaluate whether digital tools could be used to complement traditional face-to-face delivery (Wongvibulsin et al., 2021), specifically to address exercise dose fidelity by supporting patient recall and self-regulation. This study contributes by exploring whether digital prehabilitation could fill this gap, albeit as a service evaluation rather than a test of effectiveness. It is imperative that patients adhere to exercise guidelines for the greatest physiological benefits, including improved aerobic fitness levels (Khushaal et al., 2020), but not all programmes can facilitate the recommended dose so education has a part to play – particularly when patients are not being prescribed a full dose of supervised sessions, and need to understand how to meet intensity and duration targets independently.

In relation to the second aim, most patients found the digital prehabilitation extremely or very useful at providing information on exercising correctly during cardiac rehabilitation exercise classes, with patients also feeling extremely or very confident that they were excising with the correct technique. Confidence or self-efficacy can inspire adherence to exercise therefore, incorporating digital technology has the potential to facilitate the compliance with current guidelines for cardiac rehabilitation (Antypas and Wangberg, 2014). Although not directly assessed in this study, digital prehabilitation may also help reduce barriers to participation by supporting patients' understanding of what to expect, which could be explored in future work.

However, what is surprising is that despite most patients reporting that they also felt extremely or very confident that they were meeting the prescribed exercise targets, they could not recall the targets correctly. This underscores a gap in perceived knowledge and recall, suggesting that digital prehabilitation may need to be redesigned or expanded to address this issue effectively. This confidence–recall disconnect may itself be clinically valuable, as higher confidence could reduce anxiety, improve programme attendance, and enhance engagement with staff instruction, even where recall of exact targets is limited. Nonetheless, the effectiveness of the intervention in enhancing understanding and recall remains uncertain due to a lack of a comparative control group. Whether poor recall was due to limitations of the digital prehabilitation or other factors, such as patient characteristics, conflicting staff information, or complex content needs to be further explored by incorporating a control group.

For the gym-based cardiac rehabilitation programmes, 100% of patients could not recall the full rating of perceived exertion scale range correctly, highlighting a particular weakness in

communicating intensity targets, especially where the expected rating of perceived exertion differs by exercise type (e.g., aerobic vs resistance). This suggests that having two separate sets of exercise targets in gym-based classes may have contributed to cognitive overload, making it harder for patients to retain the information. Future interventions may therefore need to simplify or more clearly communicate the distinction between aerobic and resistance training targets to reduce confusion.

Exercise intensity is not typically progressively up titrated in UK cardiac rehabilitation programmes (Khushhal et al., 2020). However, for gym-based cardiac rehabilitation programmes, when an individual can perform 10 repetitions, the load should be increased and the CR10 scale should be used to predict the patients initial 1-repetition-maximum and the exercises should be performed at 30-40% and 50-60% for upper and lower body exercises respectively (ACPIR, 2023). This reference to resistance training prescription may require clearer integration in future work, particularly if used alongside aerobic targets, as it was not a central focus of the current methods. Programmes may need to adopt more targeted, engaging or interactive strategies to reinforce intensity guidelines particularly where resistance training prescriptions are included.

Indeed, utilising the Borg 6-20 Rating of Perceived Exertion Scale may not have been an effective tool to prescribe exercise intensity for gym-based programmes. Instead, repetitions in reserve is suggested to be more effective at autoregulating resistance intensity during training, especially in novice individuals as it gives an indication of how many repetitions are in reserve after the conclusion of a set (Zourdos et al., 2016). This scale offers practical feedback to help adjust the intensity for the next set or session (Graham & Cleather, 2021;

Gismondi et al., 2025). If this method was implemented, patients may have a clearer understanding of the required effort level and may have been better able to recall the intended intensity. Nonetheless, as we did not directly measure exercise adherence or fidelity, we cannot conclude if such guidelines were actually met or up-titrated to optimise training (Khushaal et al., 2020). Future research might explore whether patients would retain this information more effectively if such a scale was used instead of the Borg 6-20 Rating of Perceived Exertion Scale. This may improve patients' ability to perform exercise at the correct intensity thus, shifting the focus from recalling dose targets to improving programme familiarity and perceived value of exercise.

LIMITATIONS

The digital prehabilitation was only provided to two cardiac rehabilitation centres in North Wales, which limits the generalisability of findings. Further, we did not directly measure exercise intensity and duration during exercise classes; therefore, it is not possible to determine whether limited recall translated into reduced adherence to prescribed targets or actual exercise fidelity. The high attrition rate may also have introduced bias by overrepresenting the views of more motivated or satisfied participants, and confidence ratings may have been subject to social desirability bias. Thus, future work should recruit an adequately powered sample to enable meaningful analysis. No formal sample size calculation was undertaken because this was an exploratory service evaluation without a predetermined hypothesis, and prior data were insufficient to guide assumptions about effect sizes or dropout rates. As such, the small final sample size inevitably restricts the strength of the conclusions and limits the wider applicability. In addition, variation in patient characteristics (e.g., age, comorbidities, prior familiarity with exercise) may have influenced recall and perceived usefulness of digital prehabilitation. Future research should therefore explore whether tailoring digital prehabilitation to specific subgroups could enhance its effectiveness.

Another limitation is that the supervised exercise prescription in this study was eight sessions, below the recommended 24, reflecting real-world staffing and service constraints rather than a deliberate deviation. We also recognise that adopting a cross-sectional design means causality cannot be inferred. This was intentional, as the study was conceived as an exploratory service evaluation to assess feasibility, patient engagement, and recall of exercise guidelines rather than effectiveness. Finally, while the mean age of participants was 63.8 ± 10.5 years, some were older (75 ± 10 years), and future research should explore alternative or creative strategies (e.g., visual or memory aids) to support recall in older populations, whilst consideration of co-design principles to enhance the acceptability of approaches adopted.

CONCLUSION

Despite most patients feeling confident about their understanding of exercise targets, the actual recall of rating of perceived exertion and exercise duration targets was limited, indicating a gap between perceived knowledge and recall. This suggests that confidence alone is not a reliable indicator of programme fidelity and highlights the need for instructional approaches that support active recall and self-monitoring. The findings from this preliminary evaluation highlight the importance of refining digital prehabilitation to improve both clarity and retention of exercise guidelines, and they point to the need for more intensive educational strategies. Future work should explore other methods of assessing effort level in gym-based programmes where resistance training is a key component given the majority of patients completing a gym-based programme could not accurately recall the target rating of perceived exertion range. Future research should also assess actual exercise intensity during cardiac rehabilitation sessions following further refinement of the digital prehabilitation intervention with a larger sample size. This would enable evaluation of behaviour in practice, rather than

relying solely on recall, to better capture fidelity and clinical impact. As this was an exploratory study with a small sample, the findings should be interpreted as preliminary; larger hypothesis-driven studies incorporating baseline or control comparisons will be required to establish effectiveness and enhance generalisability. Finally, future interventions may need to consider tailoring content to different patient subgroups, such as older adults or those with multiple comorbidities, to optimise recall and applicability.

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KEY POINTS

- Some UK cardiac rehabilitation centres are unable to prescribe patients the recommended dose of exercise sessions. For the sessions that are prescribed, exercise intensity and duration targets should be closely monitored to ensure adherence to the prescribed exercise dose.
- Digital prehabilitation could be a way to educate patients on the exercise targets before they start formal cardiac rehabilitation exercise classes.
- Most patients who received digital prehabilitation were unable to recall the exercise guidelines correctly, suggesting they were unlikely to adhere to them.
- Despite this, most patients felt confident they were meeting the prescribed targets, indicating a disparity between confidence and actual recall.

REFLECTIVE QUESTIONS

1. Is there a way to enhance digital prehabilitation to ensure patients can recall the exercise guidelines correctly?

2. Should gym-based cardiac rehabilitation programmes optimise alternative methods to prescribe exercise intensity?
3. Even if patients can recall the exercise guidelines correctly, are they likely to adhere to them and improve aerobic fitness when not prescribed the full volume of exercise?

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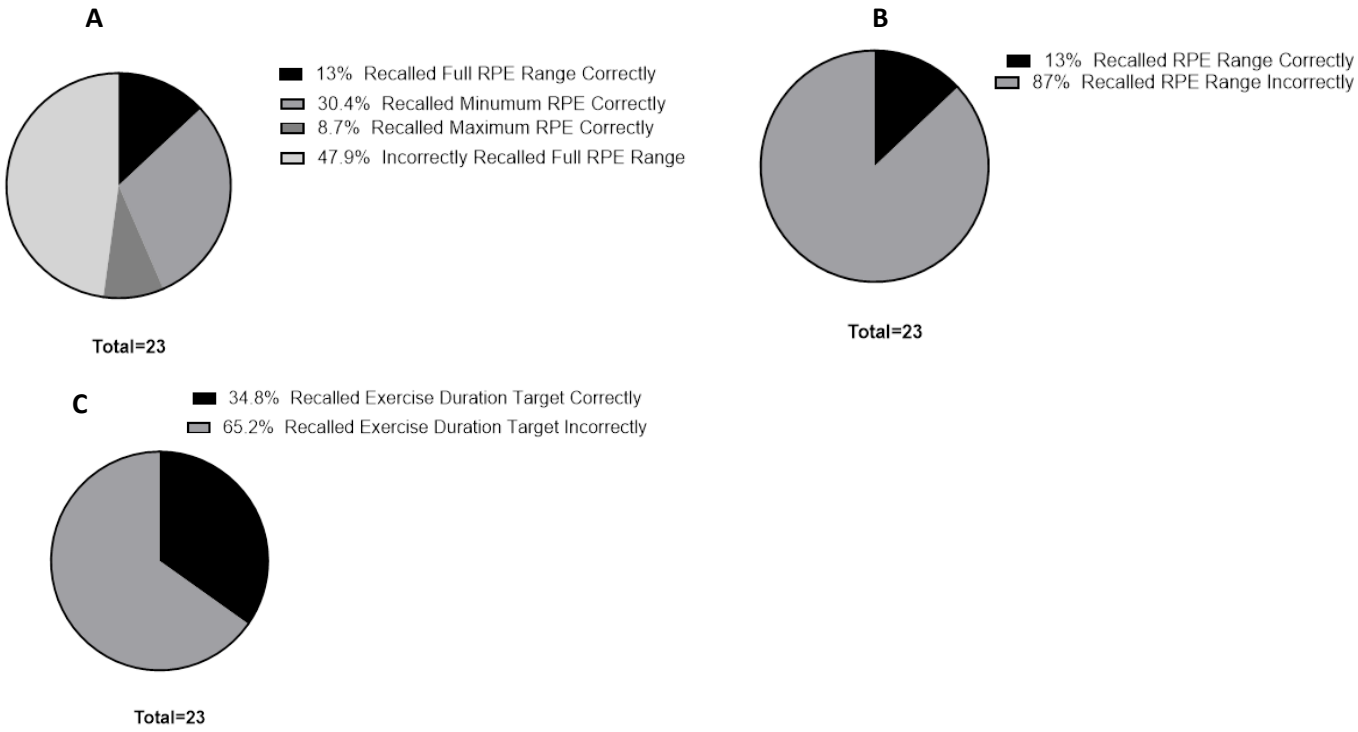
Table 2. Patient responses to the survey

Confidence		
Exercising Correctly	**N**	**%**
Extremely Confident	8	34.8
Very Confident	11	47.9
Somewhat Confident	3	13
Not so Confident	1	4.3
Meeting the Desired Exercise Targets During Class		
Extremely Confident	4	17.4
Very Confident	11	47.8
Somewhat Confident	4	17.4
Not so Confident	2	8.7
Not at all Confident	2	8.7
Meeting the Desired Exercise Targets at Home		
Extremely Confident	10	66.6
Somewhat Confident	4	26.7
Not at all Confident	1	6.7
Exercise in Class and at Home		
Extremely Confident	6	26.1
Very Confident	10	43.5
Somewhat Confident	4	17.4
Not so Confident	1	4.3
Not at all Confident	2	8.7
Recall		
Exercise Intensity		
Full RPE range (11-14)	3	13
Minimum RPE range (11)	7	30.4
Maximum RPE range (14)	2	8.7
Did not recall correctly	11	47.9
Did not recall correctly overall	20	87
Free text comments		
"At the moment I feel I should be aiming to get to no. 9 - very light."		
"13."		
"14."		
"Very light I was at a fairly good level of fitness."		
"11-12."		
"Yes, I should aim to be between 11 and 13."		
11-14		
"Around 12 to 13 is the optimum level and able to hold a conversation."		
"11."		
"No."		
Recall of exercise intensity targets for gym-based programmes		
Minimum RPE range (14)	2	12.5%
Maximum RPE range (16)	1	6.3%

Did not recall correctly	13	81%
Did not recall correctly overall	16	100%
Free text comments		
"13-16."		
"11-14."		
"12 to 13."		
"14."		
"No."		
"14."		
"light."		
Exercise duration targets		
Minimum exercise duration (20 mins)	8	34.8%
Did not recall correctly	15	65.2%
Free text comments		
"20"		
"30 minutes of activity at least 5 times a week."		
"30 minutes per day 5 times per week."		
"15mins."		
"I think possibly 20 minutes."		
"15 mins."		
"30 mins."		
"14 mins."		
"20 mins."		

RPE: Rating of Perceived Exertion



Figure

A: Percentage of patients who recalled the minimum, maximum and full RPE range correctly and incorrectly. **B:** Percentage of patients who recalled the full RPE range correctly and incorrectly. **C:** Percentage of patients who recalled exercise duration minimum target correctly and incorrectly.