

Social Media Intervention for Exercise Motivation and Cardiac Rehabilitation Adherence: A Feasibility Study

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Problem Statement:

Utilization of cardiac rehabilitation is low, and attempts to increase uptake and adherence often fail.

Background/significance:

Facebook has been reported to have high retention rates for affecting health behaviors. There is a knowledge gap regarding the effectiveness of Facebook interventions as a tool to promote cardiac rehabilitation motivation and adherence.

Purpose statement:

Utilizing Self-determination theory, the purpose was to determine the feasibility of using a Facebook intervention to affect change in motivation and self-determination for exercise, and adherence to cardiac rehabilitation in patients with heart disease during a 12-week Phase II cardiac rehabilitation program.

Research Questions:

- Is Facebook a feasible venue for delivering a motivational intervention?
- Will engagement in the Facebook group predict number of cardiac rehabilitation sessions attended and the change in motivation?
- Will scores for motivation for exercise increase for patients exposed to a Facebook intervention and across individual motivational subtypes relative to a comparison group?
- Will percentage of cardiac rehabilitation sessions attended be higher relative to a comparison group?

Methods: Participants in cardiac rehabilitation were recruited by phone then randomly assigned to intervention or comparison. Intervention group received weekly educational and provider posts per Facebook group, and opportunities for peer interaction to support motivation for exercise using Relative autonomy index, and cardiac rehabilitation adherence. Comparison group received the same educational information via email. Pre-post surveys assessed motivation (RAI) and psychological needs satisfaction (PNSE) for exercise. Comparison and Facebook groups were compared using analysis of variance (ANOVA) models, Pearson's chi-square, Fisher's exact tests, or Kruskal-Wallis tests as appropriate. Paired t-tests were used to assess RAI and PNSE change within groups. The relationship between RAI change and continuous variables was assessed using Pearson or Spearman correlations with 95% confidence intervals. For categorical measures, means and standard deviations with p-values from ANOVA models. Relationships between # of sessions with continuous variables were assessed using Spearman correlations. Analyses were performed using SAS® Software. A significance level of 0.05 was assumed.

Findings:

Six hundred and nine potential participants were contacted and 22 agreed to participate-8 in the comparison group and 14 in the Facebook group.

Engagement in the Facebook group (comments/"likes") did not predict number of sessions or motivation change.

No between group differences were found for demographic variables, change/intake PNSE (competence, autonomy, relatedness), change/intake RAI, or sessions completed.

Participants who had greater change in PNSE-autonomy from pre-to-post intervention had more sessions ($r=0.61$, $p=0.024$). Those with higher RAI at intake had more sessions ($r=0.53$, $p=0.010$).

Implications for Practice:

Based on low engagement and recruitment numbers, a Facebook study, as designed, would not be feasible for a larger trial. No between group differences were found. Participants with greater exercise motivation and increase in autonomy, completed more sessions. More research is needed to find ways to engage those who have low motivation.

Testimonial:

The Sigma Theta Tau grant made my study possible by allowing me to pay personnel to recruit participants and help with data collection. Without their help, I would not have had the time to make the hundreds of visits and calls necessary in order to conduct the study. Even though recruitment numbers were low, 609 potential participants were contacted (3.6% agreed to participate). I would never have been able to do this amount of work without funding.