Background: Cardiac rehabilitation programmes have demonstrated the benefit of exercise for people with atrial fibrillation (AF). Traditional Chinese low- to moderate-intensity exercises like Tai Chi and Qigong may be suitable for older patients with AF. Exercise increases quality of life, physical functioning, and psychological well-being in older people with cardiovascular diseases, but currently there are no studies among AF patients.

Purpose: To assess the feasibility of conducting a randomised controlled trial (RCT) of Tai Chi/Qigong for patients with AF using a multi-method approach, including a systematic review, feasibility RCT, and embedded qualitative study and process evaluation to evaluate recruitment, retention, and participant experiences.

Methods: a feasibility randomised control study (RCT) was conducted, which included seventy-three AF patients (mean (standard deviation (SD)) age 68.9 (8.1) years, 50 (68.5%) female) recruited via primary care and the Atrial Fibrillation Association (AFA). Patients were randomised to standard AF care (control group) or the intervention consisting of 12 weeks of online Tai Chi/Qigong exercises, at least once a week, plus standard AF care. Fifteen participants (5 control, 10 intervention) were interviewed for the embedded qualitative study and process evaluation. Primary outcomes were recruitment and retention rates. Secondary outcomes were health-related quality of life (HRQoL) and physical functioning assessed at baseline, 6-, and 12-weeks by the Short Form 12-item Questionnaire (SF-12), EuroQol 5-D (EQ-5D-3L), and Atrial Fibrillation Effect on Quality of Life (AFEQT). A researcher-designed survey assessed participant satisfaction with the intervention upon completion.

Results: In the feasibility RCT, the overall recruitment rate was 74/271 (27.3%), with significantly higher recruitment from the AFA than primary care (77.8% vs. 9.0%; $p<0.001$; respectively). The overall retention rate was 59/73 (80.8%) with no significant differences between the study groups. There was a significant increase in physical functioning domain of the SF-12 in the intervention group from baseline to week 12 (median (interquartile range (IQR), 75.0 (25.0–87.5) to 75.0 (50.0–100.0); $p=0.04$). Disease-specific HRQoL increased significantly in the intervention group from baseline to week 12 (mean (SD) 69.5 (17.9) to 74.4 (18.3), $p<0.05$). Participants expressed satisfaction with primary care and AF recruitment methods and mentioned few limitations. Participation was motivated by personal interest, willingness to help, and alternative AF management. Participants in the intervention group found online sessions acceptable despite the IT challenges.

Conclusion: A 12-week Tai Chi/Qigong exercise programme for patients with AF is feasible for a future RCT based on recruitment and retention rates. The intervention significantly improved AF patients' HRQoL and physical functioning, and patients found the Tai Chi and Qigong exercises enjoyable and acceptable.