

SHUTTLE TIME FOR SENIORS: THE IMPACT OF 8-WEEKS STRUCTURED BADMINTON TRAINING ON MARKERS OF HEALTHY AGEING AND EVALUATION OF LIVED EXPERIENCES

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INTRODUCTION

- Physical activity (PA) has a pivotal role in promoting healthy ageing and is a primary focus of public health strategy to improve mental and physical health [1].
- Age-appropriate group-based exercise, using sport as a vehicle, has received recent attention where combining the physical and social aspect of sport has been shown to be effective for improving physical and psychosocial facets important for the promotion of healthy ageing [2].
- Whilst individuals that continue to play sport across the life course demonstrate health benefit, sport has not been widely explored as a PA opportunity for older adults [3].
- Research focused on developing and evaluating the efficacy of age-appropriate sports interventions are sparse and given the limited logistical burden and impact of seasonality, combined with its physiological, biomechanical and cognitive demand, a structured and progressive programme of badminton for older adults is well placed to develop physical health and wellbeing.

AIM

Given the paucity of age-appropriate introductory sports intervention programs, the study evaluated the efficacy of a newly designed 8-week badminton training program on markers of healthy ageing and the lived experiences of participation.

METHODS

A sequential mixed method, pragmatistic approach was utilised to address the primary aims of the project where the experimental procedures were split into two distinct parts. In part one, participants completed a battery of healthy ageing assessments 8-weeks apart (Fig 1). Participants in the intervention group completed a once weekly 8-week badminton intervention, STS, designed specifically for this project to develop functional fitness and badminton specific skill. The STS intervention was designed specifically for adults aged 60 yrs. and over, with no or limited recent badminton experience, and to be inclusive of fitness capabilities. In part two, the lived experiences of participants (N=18; 3 groups) that completed the intervention was assessed by conducting and analysing information gathered from focus groups.

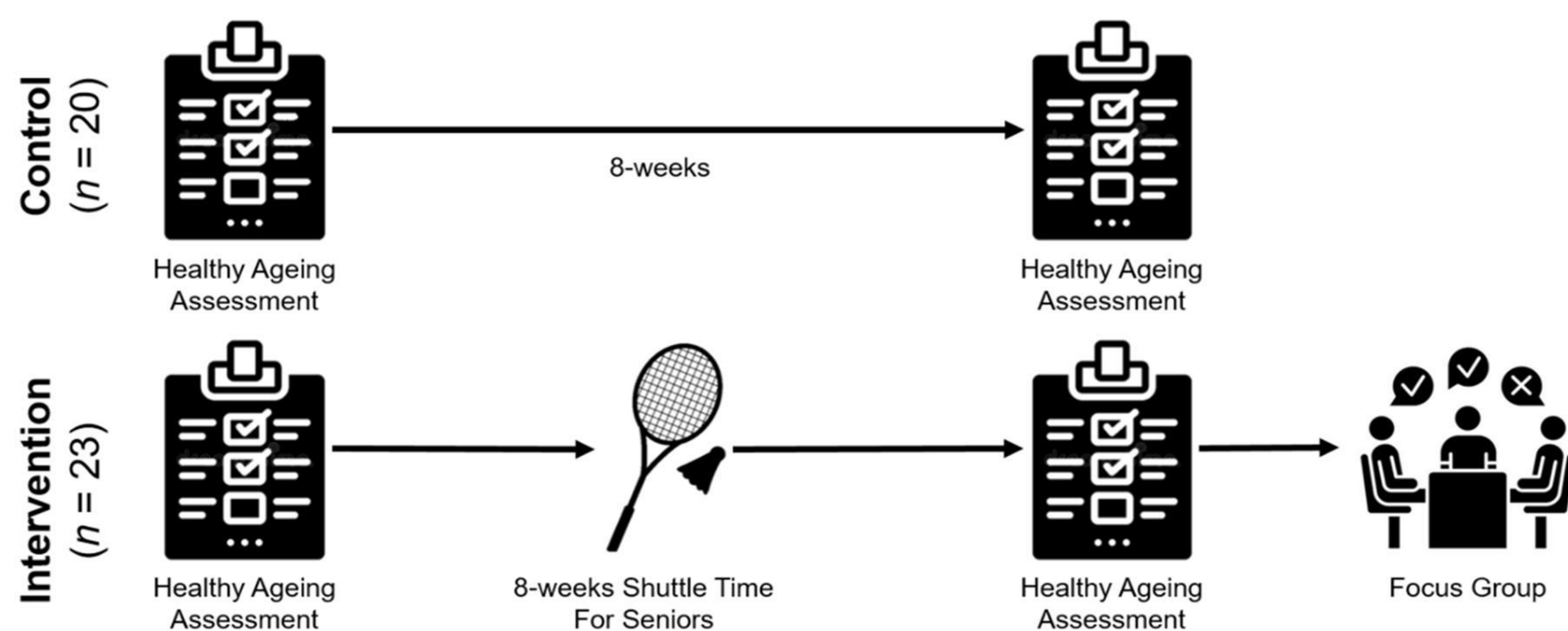


Figure 1. Overview of Methodological Approach

RESULTS

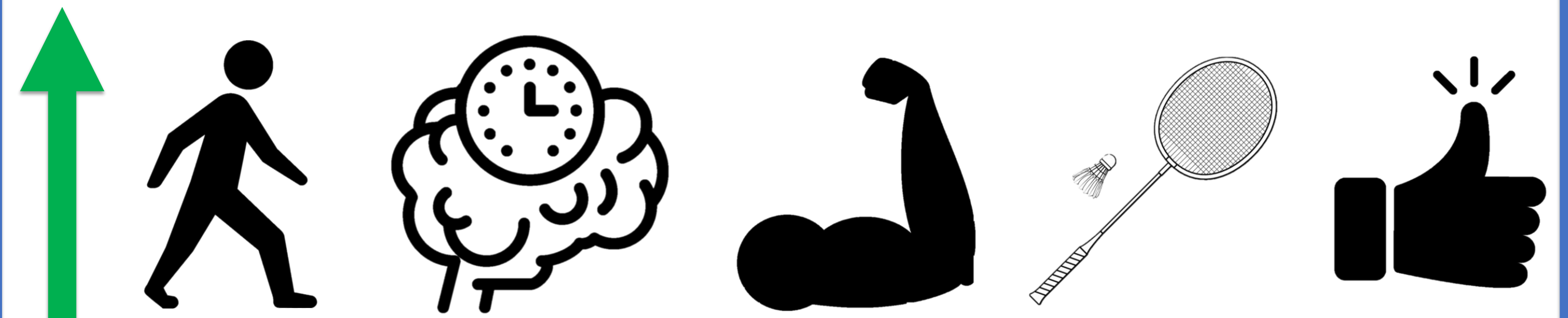


Fig 1 – When compared to the control group, participants that completed the intervention improved upper body strength (30s arm curl: $P=.022$; $g=.32$), aerobic capacity (6 minute walk test; $P=.005$; $g=.34$), coincidence anticipation time at slow and fast stimulus speeds ($P<.006$; $g>.56$), short serve performance ($P=.008$; $g=.910$) and self-efficacy for exercise (self-efficacy for exercise scale; $P=.004$; $g=.503$).

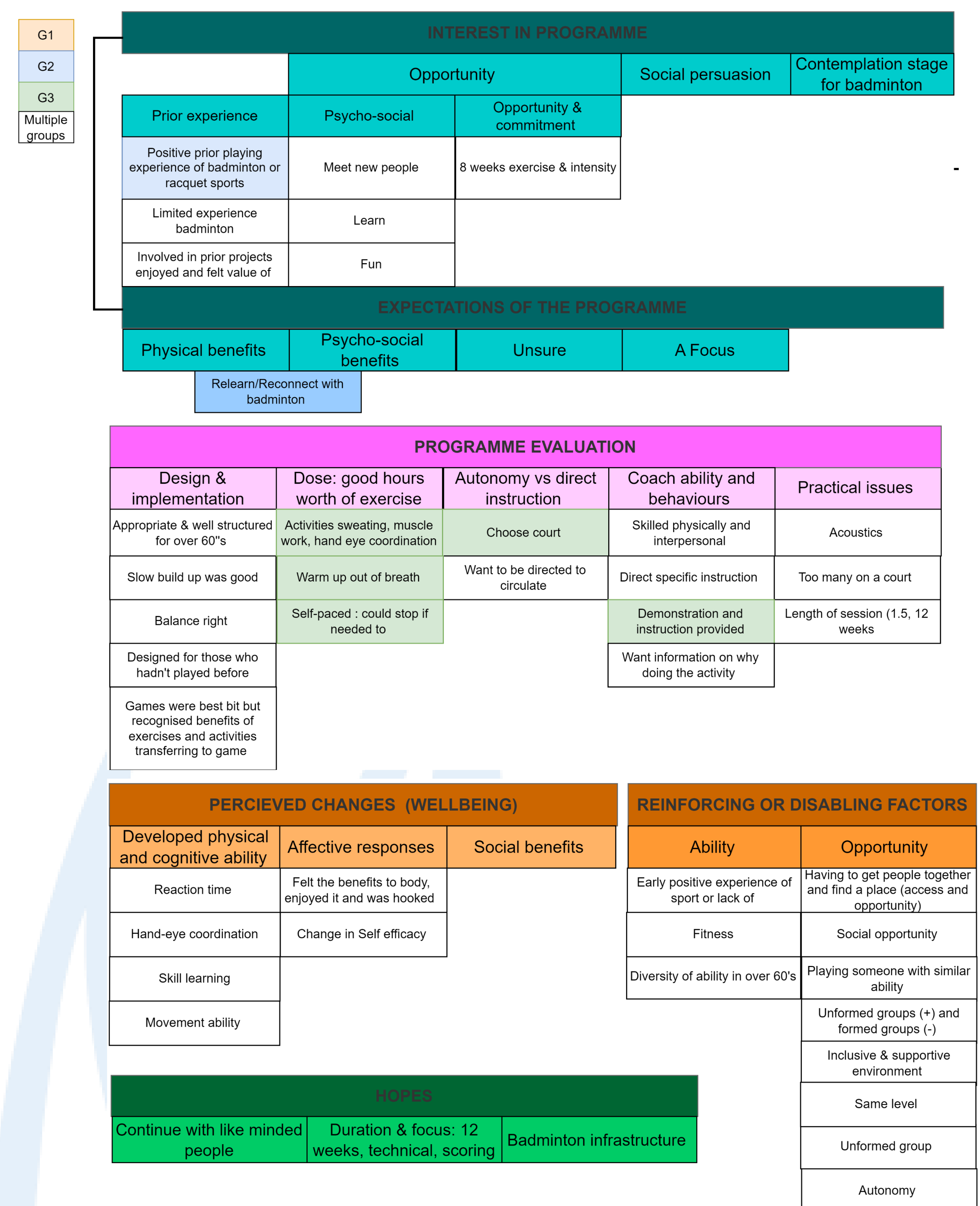


Fig 2 – Summary of the lived experiences of STS where qualitative analysis identified themes related to interests and expectations of the programme, experience of the programme, and sustainability of behaviour and hopes for the future. [G1 = Group 1; G2 = Group 2; G3 = Group 3; corresponding group colour coding reflects themes identified by specific groups]

CONCLUSION

- Participants indicated that STS was appropriate and well-structured for the target population.
- STS was effective for increasing upper body strength, aerobic capacity, coincidence anticipation time, short serve performance and self-efficacy for exercise.
- STS was an enabler to participation in badminton, where the age-appropriate opportunity to participate, with likeminded people of similar ability were primary motivators and where the reported increase in self-efficacy for exercise may be an important driver to sustaining behaviour.
- Strategies to overcome issues with badminton infrastructure are needed to promote long term engagement.

See STS



1. Public Health England, P.H., Wider impacts of COVID-19 on physical activity, deconditioning and falls in older adults, P.H. England, Editor. 2021, Public Health England: <https://www.gov.uk/government/publications/covid-19-wider-impacts-on-people-aged-65-and-over>.
 2. Duncan, M.J., et al., The Effect of 12-Weeks Recreational Football (Soccer) for Health Intervention on Functional Movement in Older Adults. *Int J Environ Res Public Health*, 2022. 19(20).
 3. Jenkin, C.R., et al., Sport and ageing: a systematic review of the determinants and trends of participation in sport for older adults. *BMC Public Health*, 2017. 17(1): p. 976.