

LEVERAGING ADAPTATIVE SPORTS AS A PREVENTIVE CARE STRATEGY AGAINST FRAILITY FOR SENIORS IN A RESIDENTIAL CARE SETTING

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Project Synopsis

Adaptive sport is an evidence-based exercise programme that improves Seniors' health by lowering adverse effects of sedentary lifestyles and increasing overall quality of life.

Background

Set against the COVID-19 episodic lockdowns for Methodist Welfare Services (MWS) Christalite Methodist Home, the Allied Health team embarked on a multi-component exercise programme with recreational elements to address inactivity, improve well-being and mitigate social isolation. The pilot was launched in April 2022 and data was collected from 20 residents over a 6-month period.

Project Details

The pilot programme is based on *WHO recommendation of physical activity for older adults. Components of strength, endurance and balance training are woven into a 45-minute routine. Sporting equipment with modified rules accommodate varying levels of functional abilities and encourage equitable participation amongst residents. This adaptation allows wheelchair-bound residents to join in with minimal barriers, making sporting activities truly accessible and inclusive. Additionally, cognitive elements such as instruction following, new skills acquisition, game strategy application and friendly competition have been included to increase socialisation and build camaraderie in the community. Dual-task activities such as balancing a balloon on their rackets and counting backwards from 20 to 1 are incorporated to improve both balance and cognition. Tokens are introduced as incentives to change behaviour by encouraging them to participate in regular physical activity and achieve goals. Residents gain a sense of autonomy and satisfaction when the tokens are used to 'purchase' a snack of their choice in the minimart corner sited within the therapy room.

**150 to 300 mins of varied multicomponent physical activity that emphasises functional balance and strength training over 3 days or more per week routine can enhance functional capacity, improve mental health and reduce the rate of falls.*

Project Outcomes

To evaluate programme effectiveness, validated tools, namely Berg Balance Scale (BBS) and Short Physical Performance Battery (SPPB) were used to assess the physical domains. Self-reported surveys were used to assess the social and emotional domains.

20 CMH residents were assessed at two time points (baseline and 6 months later). 60% of the residents displayed improvement in their balancing abilities (Berg Balance Scale) and 40% showed improvement in their lower extremity functioning (Short Physical Performance Battery). Results from a self-reported survey reflected an overall increase in residents' social communication and willingness to participate in team-based activities, after 3 months. Residents were also asked to rate their mood and energy levels at the start and end of each adaptive sport. Overall, residents reported higher mood and energy levels.

The Allied Health therapists also worked with the case managers to enhance each Senior's relationship-based care plan by empowering them to view physical exercise and community participation as a means to uplift their quality of life in the residential home setting.

What's Next

The AH team has replicated this pilot across MWS Nursing Homes and Active Ageing Centres. We intend to include more outcome indicators to measure improvements in functional reserve. We hope to include more evidence-informed practices, so that the pilot can open up collaborative opportunities to share best practices across other residential homes in Singapore.

