

Generations Active Together: An Example of Using Physical Activity Promotion and Digital Technology to Bring Together Adolescents and Older People in Stirling, Scotland

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ABSTRACT

The Generations Active Together (GAT) program, delivered by Active Stirling in central Scotland, is an intergenerational physical activity (PA) program for adolescents in high school and older adults in care homes and community groups. The Generating Older Active Lives Digitally (GOALD) Research Team sought to use GAT to examine how digital technology developed for the purpose of PA and sports-based reminiscence can be used to improve social connectedness for older adults. This paper details the challenges and successes of delivering the GAT program and describes the differences between in-person pre-pandemic delivery of GAT with the attempted digital delivery during the pandemic. The transferable lessons learned from GAT delivery to GOALD project planning and implementation included, but are not limited to, the importance of in-person activities for both generations and using digital technology as a complementary, rather than a replacement tool for PA delivery.

KEYWORDS

Exercise; intervention; gerontology; online

CONTRIBUTION TO THE FIELD

- Intergenerational activities focusing on PA involving adolescents and older adults is possible with attention to reciprocal inputs and benefits for all generations and are potentially more effective and easier to deliver in person.
- Where in-person PA delivery is impossible, digital-only PA is arguably better than no interaction but requires support in setting up technology to deliver PA effectively.
- Digital technology is likely to be more effective in supporting intergenerational PA when complemented by in-person interactions.
- Adolescents and older adults in care homes can engage in beneficial interaction, but attention should be paid to school commitments at this age and stage, as well as the practical aspects of travel and scheduling of this kind of contact.

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Program goals

This case report presents the Generations Active Together (GAT) program, delivered by Active Stirling in the Stirlingshire region of Scotland. GAT was developed as part of the *Active Stirling* Health & Wellbeing and Sports Leadership programs run in schools (Care Inspectorate, 2019), aiming to break down barriers and perceptions between generations. GAT brings communities together to promote leadership skills in pupils and provide physical activity (PA) to older adults. A focal theme of GAT is PA, due to evidence-based benefits for young and older people's health and wellbeing, such as improved cardiovascular health, bone and muscle strength (Posadzki et al., 2020). Through PA, the program aims to reduce ageist stereotypes and assumptions that adolescents may have about older adults' PA and abilities, while providing older adults opportunity to engage with adolescents to alleviate potential feelings of loneliness and reduce ageism. Intergenerational programs are known to benefit both young and old people through reducing social isolation, the exchange of life skills and sharing of life experiences (Peters et al., 2021). Additionally, social support and intergenerational relationships are associated with positive outcomes, like lower reported levels of depression and higher well-being for older adults (Li et al., 2019; Liu et al., 2022). Both young and older people perceive intergenerational learning with digital tools as a chance to build relationships across generations (Leek & Rojek, 2021).

This program was identified by members of the Generating Older Active Lives Digitally (GOALD) research team, who primarily intended to use GAT to support the GOALD project through participant recruitment to GOALD and GOALD project delivery. The main aim of GOALD is to examine how digital technology can be used to improve social connectedness through PA and sports-based reminiscence for older adults, including intergenerational contact and learning. By design, there is significant overlap between GAT and GOALD, and this paper presents some of the transferable lessons learned from the collaboration.

Participants

Since inception in 2018, Stirlingshire high schools have been identified by the "Active Schools Team" (within Active Stirling) and subsequently invited to participate in GAT. Adolescents in years S5 and S6 of high school (aged 15–17 years) are the participants. The way in which GAT is embedded in the school program is school-dependent, which partially impacts the mechanism through which the adolescents are recruited. However, across all schools, eligible adolescents are invited to opt-in for GAT at the start of the academic year

(August/September) in accordance with the requirements of their Sports Leaders and/or Health and Wellbeing program.

Care homes and community groups in the Stirlingshire region that have been invited to participate in GAT were purposively chosen for their proximity to high schools and their appetite for an intergenerational PA program. The older people for whom GAT is designed are care home residents or community members. On any given delivery day, care home staff are given agency to decide who will participate based on a variety of factors, such as participant willingness or illness on the day, room availability and size.

Program content and delivery: pre-COVID pandemic

The GAT program is typically delivered in 16 weeks (2 × 8 week blocks). Block One comprises eight weeks of PA delivery planning and curriculum-linked classes (e.g., learning about dementia and ageism) for the school pupils ahead of their interactions with older adults in care homes in Block Two. Block One seeks to educate pupils about the benefits of meaningful activities for older people and is framed by a life course approach to healthy aging and accessible critical gerontology. It includes learning about age-specific national guidelines for PA (UK Chief Medical Officers' Physical Activity Guidelines, 2019), the lifetime benefits of PA (Posadzki et al., 2020), attitudes toward aging and dementia, and myth-busting about the PA capabilities of older adults. The adolescents are also exposed to music from different eras (e.g., the 1950s) and learn about the reminiscent value of music in older adults. Importantly, GAT is also supported by Alzheimer's Scotland, who deliver "Dementia Friendly" training sessions in Block One. All other Block One sessions are taught by an Active Stirling staff member, who is supported by a high school teacher. Additional training beyond the qualifications of the job (e.g., intergenerational practitioner training) is delivered by *Generations Working Together*, Scotland's flagship charity for intergenerational work. The young people receive a badge and a certificate on completion of that training portion of GAT. Time allocated to the classroom-based portion varies between schools, but sessions are usually once weekly and ranging between 50 min and 1.5 hours each. Students then work as a group to develop a program of PA suitable for older adults.

In Block Two, pupils visit care homes over another eight-week period. These visits are facilitated by the same Active Stirling staff member who delivers Block One and are allocated the same amount of time as in Block One, but this includes time for travel. Intergenerational contact time ranges between 30 minutes and one hour per week and includes three to eight adolescents delivering their preplanned PA sessions from Block One with the older adults and some time for singing, dancing and casual socializing. Pre-pandemic, delivery was exclusively in-person at schools (Block One) and in care homes and community centers (Block Two). The project was well-

received by the participating adolescents, care homes and community groups, according to informal feedback collected by Active Stirling from the adolescents, their teachers and care home staff, with keenness to expand its reach and scale as an evidence-based intervention. The last GAT program to run pre-pandemic included two high schools, one of which was paired with a care home, and one which was paired with a local community group. It was reported that the pupils became “much more confident working with older people. They have a much better understanding of what it feels like to become older and what can be done to make every day meaningful” (Care Inspectorate, 2019).

Program content and delivery: mid- and post-COVID pandemic

The GAT program was impacted severely by the pandemic. Active Stirling staff assigned to GAT were initially furloughed during the pandemic, until phased return. However, no in-person classroom nor care home visits were allowed until August 2021, with some Covid restrictions in place.

During the height of the pandemic only one school participated, and all intergenerational contact was replaced with videos of PA sessions created by students and filmed by Active Stirling staff during Block One, which continued. Videos were delivered to the care home by an Active Stirling staff member ahead of Christmas 2021, finalizing the GAT project for the school year of 2021/22. These videos were also shared with other care homes enabling further recruitment for the GAT project and GOALD. Care home residents enjoyed participating in the exercises prescribed in the videos and appreciated the effort from the pupils. However, residents were eager to return to in-person GAT delivery. Additionally, there was disappointment among high school pupils over missing the “full” GAT experience. Many pupils recommended the program over other curriculum offerings.

For the school year of 2022/23, four schools ($n = 56$ adolescents) and four paired care homes ($n = 58$ older people) were successfully recruited and completed the GAT project (Blocks One and Two). However, one of these schools was late to start and a fifth school withdrew participation due to competing priorities for their pupils (e.g., study period). Delivery of GAT was still somewhat challenging during the school year of 2022/23, with plenty of documented interruptions including school holidays and events, care home lockdowns due to infectious diseases (e.g., Covid-19, influenza), severe weather warnings and wide-spread industrial action. Delivery was entirely in-person but subject to Covid restrictions and protocols stipulated by the Scottish government and individual care homes.

All five schools had also expressed an interest in participating in GOALD, with GOALD research staff attending GAT sessions periodically for recruitment. However, competing academic and curriculum priorities post-Covid created

recruitment challenges, making scheduling intergenerational sessions impossible. Subsequently, the five schools withdrew interest from the GOALD project.

Lessons learned

The GAT program is seen as beneficial and enjoyable by all direct participants, further to people who engaged indirectly (e.g., care home staff, teachers). Informal evaluation evidence suggested the program worked well when delivered in-person (as intended, pre-pandemic and “post-pandemic”), versus being delivered digitally without any face-to-face intergenerational contact. Participants and others in proximity to GAT acknowledged the benefits of having a digital option for delivery versus no delivery, but the lack of in-person intergenerational contact was perceived as less effective. We found success of the GAT project hinges on intergenerational engagement and participation in PA, and in-person delivery appears to maximize reciprocal benefits for both generations.

Several of the above-mentioned challenges and others were also identified during the pandemic delivery of GAT, which were also felt by the GOALD project more widely. These included COVID-19 outbreaks leading to care home and school restrictions limiting in-person sessions; high care home staff turnover and sickness absence; increased Covid-related workload making it difficult to fit time in to facilitate GAT activities; Wi-Fi connectivity issues preventing smooth digital delivery; and finally, the challenge of scheduling live digital sessions to fit with school and care home timetables especially when pupils needed to prioritize catching up on lost study time. Going forward, researchers and program coordinators would benefit from taking a pragmatic and flexible approach when designing, adapting, and delivering programs that include both adolescents in high school and older people in care homes. Importantly, there is benefit in tackling challenges as partners especially where there are obvious mutual benefits (e.g., researchers/program coordinators working with the adolescents/care home staff/teachers to identify solutions for successful delivery).

Next steps include using the lessons learned here to continue to deliver and develop the GAT program, plan formal evaluation of program outcomes, and test alternative strategies for using digital technology as a tool to enhance PA and social connectivity both within the GOALD project and future projects and programs.

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Disclosure statement

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Author contributions

ST conceived of the idea for the paper. ST and AW wrote initial drafts with contributions from LT, GR, HB, LC, RH, PC, CH, and GM. All authors reviewed and approved the final draft.

References

- Care Inspectorate. (2019). *Encouraging people to move more in bringing generations together: taking intergenerational practice to the next level*. <https://hub.careinspectorate.com/media/3323/bringing-generations-together.pdf>
- Leek, J., & Rojek, M. (2021). ICT tools in breaking down social polarization and supporting intergenerational learning: Cases of youth and senior citizens. *Interactive Learning Environments*, 31(6), 3682–3697. <https://doi.org/10.1080/10494820.2021.1940214>
- Li, C., Jiang, S., & Zhang, X. (2019). Intergenerational relationship, family social support, and depression among Chinese elderly: A structural equation modeling analysis. *Journal of Affective Disorders*, 248, 73–80. <https://doi.org/10.1016/j.jad.2019.01.032>
- Liu, Y., Li, L., Miao, G., Yang, X., Wu, Y., Xu, Y., Gao, Y., Zhan, Y., Zhong, Y., & Yang, S. (2022). Relationship between children's intergenerational emotional support and subjective well-being among middle-aged and elderly people in china: The mediation role of the sense of social fairness. *International Journal of Environmental Research and Public Health*, 19(1), 389. <https://doi.org/10.3390/ijerph19010389>
- Peters, R., Ee, N., Ward, S. A., Kenning, G., Radford, K., Goldwater, M., Dodge, H. H., Lewis, E., Xu, Y., Kudrna, G., Hamilton, M., Peters, J., Anstey, K. J., Lautenschlager, N. T., Fitzgerald, A., & Rockwood, K. (2021). Intergenerational programs bringing together community dwelling non-familial older adults and children: A systematic review. In *Archives of gerontology and geriatrics* (Vol. 94). Elsevier Ireland Ltd. <https://doi.org/10.1016/j.archger.2021.104356>
- Posadzki, P., Pieper, D., Bajpai, R., Makaruk, H., Könsgen, N., Neuhaus, A. L., & Semwal, M. (2020). Exercise/Physical activity and health outcomes: An overview of Cochrane systematic reviews. *BMC Public Health*, 20(1). <https://doi.org/10.1186/s12889-020-09855-3>
- UK Chief Medical Officers' Physical Activity Guidelines. (2019). https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/832868/uk-chief-medical-officers-physical-activity-guidelines.pdf