



## Article

# Development and Implementation of an Intergenerational Bonding Program in a Co-Located Model: A Case Study in Singapore

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**Abstract:** There is a well-established body of evidence that intergenerational bonding programs (IGPs) can improve the overall well-being of older adults and strengthen relationships and understanding between generations. There is limited literature on the experience of IGPs in an Asian context, despite many of these countries facing faster rates of population ageing than other Western countries. In Singapore, intergenerational bonding is a priority in national efforts to encourage successful ageing. This paper presents a case study of the development and implementation of a co-located (shared site) model IGP in Singapore. Drawing on interviews with key stakeholders, the aim of this case study is to present the realities of the evolution of an IGP from conceptualisation through to implementation, and used the nursing home's COVID-19 experience to illustrate issues of sustainability affecting IGPs with vulnerable populations. The findings will inform the development and implementation of similar future programs.

**Keywords:** intergenerational relations; intergenerational bonding; healthy ageing; case study; Singapore; COVID-19

## 1. Introduction

While increasing longevity is one of the triumphs of modernity, the rapid ageing of populations highlights support for older adults as a significant global issue (United Nations, Department of Economic and Social Affairs, Population Division 2019). An increasing number of older adults face increasing social isolation (Courtin and Knapp 2017). Intergenerational bonding programs (IGPs) have been shown to reduce social isolation and foster relationships between young and old (Canedo-Garcia et al. 2017). However, there is limited literature on IGPs in Asian countries despite the proportion of older adults living into their 80s and beyond increasing at a faster pace. This paper presents a case study of the first co-located (shared site) nursing home in Singapore, highlighting the practical realities of implementing intergenerational care within an Asian context.

### 1.1. Ageing in Singapore

Singapore is second only to Korea as the fastest ageing country in the world (United Nations, Department of Economic and Social Affairs, Population Division 2019). In Singapore, the proportion of adults aged 65 years and above has increased from 10.4% of the population in 2011 to 17.6% in 2021 and is expected to increase to 23.8% in 2030 (Singapore Department of Statistics 2021a). Concurrently, there is a decline in the old-age support ratio from 7.4 in 2010 to 4.0 in 2021 (Singapore Department of Statistics 2021b)

posing great challenges for how society supports the health and social care needs of its older population as they age. For many older adults, their quality of life and functional status as they age are negatively affected by chronic comorbidities and age-related diseases such as cognitive impairment (Leong et al. 2022). Furthermore, social isolation has been identified as a significant issue for many older adults alongside decreased activity level and reduced social networks. Studies have shown that an increase in social interaction is associated with improvements in cognitive performance, though more robust evidence of community-based programs is needed (Peters et al. 2021).

Traditionally, like in many Asian cultures, in Singapore, the young are expected to respect the older generations. However, Singapore is unique in its multi-cultural and multi-lingual context and has been undergoing rapid social and economic changes in the past decades. For example, the decline in the number of multi-generational households (Ministry of Social and Family Development, Republic of Singapore 2022) reduces intergenerational interaction within the family (Tan and Ng 2010). The increasing language divide across generations (Singapore Department of Statistics 2021c) resulting from changing state policies may undermine communication effectiveness even if interactions between the young and old occur (Tan and Ng 2010). Older adults with limited English proficiency face difficulty in interacting with the wider society (Ng and Cavallaro 2021), which may reduce social engagement and worsen ageist attitudes (Hagestad and Uhlenberg 2005).

### 1.2. Intergenerational Bonding

Intergenerational bonding programs are designed to promote social interaction between the young and older generations, and their benefits are well-documented (Canedo-Garcia et al. 2017). Research in the intergenerational and gerontology fields has found that improved intergenerational relationships are associated with enhanced quality of life, reduced social isolation, and a renewed sense of self-worth among older adults (Wong et al. 2018). Furthermore, children's participation in IGPs challenges stereotypical understanding of older adults and improves children's communication skills and confidence in interacting with older adults (Gualano et al. 2018). Older adults benefit from well-being improvement (Canedo-Garcia et al. 2017) and report feeling energized, with renewed purpose in life as a result of participation in IGPs (Bagnasco et al. 2020). The quality of relationships may also be influenced by IGPs; some programs found that the pairings of children with older adults resulted in a grandparent–grandchild-like relationship between the dyads (Bagnasco et al. 2020). These effects are significant given the unique nature of these relationships—they are often non-familial, with a large age gap spanning two or more generations, and are developed over a short period.

With the global trend towards shrinking household sizes resulting from increasing urbanization (Bradbury et al. 2014), IGPs have the potential to provide valuable opportunities for generations to interact outside their own family. In addition, IGPs reduce ageism within communities, enhance community-level relationships, and promote age-inclusive practices such as age-friendly information systems and public environments (Steward et al. 2021).

### 1.3. Intergenerational Bonding Programs in Singapore

Much of the existing literature on IGPs is found in western high-income countries, with the focus on the outcomes of IGPs in individual participants, predominately on the older generation (Steward et al. 2021). Less is known about IGPs in Asia. Lou and Dai (2017) found only 14 examples of IGPs in Taiwan, Hong Kong, Japan, and South Korea. These programs were mostly art-based or cultural-heritage programs. Participants were comparatively free of medical conditions. Most programs reduced age stereotyping and improved the well-being of the older participants, aligning with the general IGP literature.

In Singapore, intergenerational programs exist in different forms ranging from high school students providing training to the older adults on digital skills, befriending activities, arts and crafts programs involving pre-school and primary aged children, or youth visitation programs with nursing homes or eldercare centres. One qualitative study of a day

centre visitation IGP model in Singapore found that the older adult participants reported satisfaction and the mutual relationship between the two generations was characterised by companionship, care, trust, and affection (Leong et al. 2022). A 12-month pilot IGP was conducted with a senior care centre and childcare centre co-located in a community hub. This program—comprising fortnightly shared activities based around cultural festivities—provided a sense of purpose for the older participants and an opportunity for passing down cultural heritage to the younger generations (Lim et al. 2019).

A less common form of IGPs in Singapore is the co-location of eldercare and childcare facilities within the same site (also known as ‘shared site’ IGPs). Shared site IGPs are characterised by ongoing services provided to both the young and older adults concurrently, at the same physical site (Goyer 2001 cited in Jarrott and Bruno 2007). A typical example is the co-location of childcare with a nursing home. These services may be in the same building or premises and present several advantages for intergenerational programming (Jarrott and Lee 2022). Co-location allows for continuity of planning of an IGP on an ongoing basis, transportation barriers are reduced, interaction between the young and older individuals may be more fluid and incidental, and there is the benefit of shared resources. In addition, the availability of childcare and eldercare within a co-located site can ease the burden for family caregivers in the ‘sandwich generation’ as well as provide access to childcare resources for staff of the organization.

The promotion of greater intergenerational interaction is highlighted in Singapore’s action plan for successful ageing with specific reference to building more co-located eldercare and childcare facilities within the community (Ministry of Health 2016; Rogerson and Stacey 2018). Despite these policy goals, however, few studies exist in Singapore on the development and implementation of IGPs.

In addition, Singapore’s intergenerational interaction is complex given its multi-ethnic, multi-lingual population and rapid social and economic changes resulting in differing generational experiences. This may affect the practice and beliefs of traditional values such as respecting the elderly or filial piety (Thang et al. 2003). With reducing household sizes, IGPs in co-located shared site settings could offer a non-familial extension of filial piety at the community level.

#### 1.4. Study Aim

To address this gap, the aim of this case study was to present the evolution of an IGP in Singapore from conceptualisation through to implementation and adaptation during the COVID pandemic. The paper draws on interviews and focus groups with key personnel from senior managers, nursing home and childcare staff, as well as therapists to highlight key gaps and lessons learnt that can contribute to future evaluation of such programs. This paper adds to the literature the experience from a high-income Asian context to inform the global experience of intergenerational bonding programs.

## 2. Materials and Methods

### 2.1. Study Site

St. Joseph’s Home (SJH) is a government-subsidised nursing home in Singapore with over 400 beds. It is the first (and, to the best of our knowledge, the only) nursing home that has a co-located infant and childcare centre (ICC) sharing the same site. The site includes dementia care and hospice, as well as physical and arts-based therapy. The grounds cover about twenty-two thousand square metres in total. All elderly residential units are located in a six-storey building while the ICC is situated in an annex block. Intergenerational interaction is built into the childcare curriculum, from meet-and-greet sessions, or spontaneous interaction on the premises. In addition, interactions are also structured, involving planned programs with selected activities scheduled into the daily routine of both the nursing home residents and the children. The structured IGPs are conducted regularly, involving the childcare centre children as well as students from nearby schools. The age range of participants in these programs spans from three-year-olds to

over-100 s. The intergenerational activities range from singing, storytelling, art-based activities, physical activities, and music-based activities.

## 2.2. Participants

This case study draws on a descriptive qualitative approach. Purposive sampling was used to recruit 14 key personnel from SJH who were either involved in the IGP and/or other intergenerational bonding activities. Participation in the research was voluntary and participants could withdraw from the study at any time. The study was approved by the Institutional Review Board of the Singapore Institute of Technology (Approval Number: 2021028). Details of the sample are included in Table 1 below. All participants except one were female, and the years of working experience ranged from 1 year to 18 years.

**Table 1.** Participant demographics.

Category	Designations and Number of Participants	Years of Working Experience	Additional Roles
Nursing Home Staff	Art Therapist (1), Gym Tonic Instructor (1), Nurses (6)	1–18 years	
Senior Management	Community Partnership Executives (2), Principal of ICC (1), Head of Allied Health Services (1)	2–8 years	IGP Workgroup
Teachers of ICC	Chinese Teacher (1), Senior Teacher (1)	3 years	

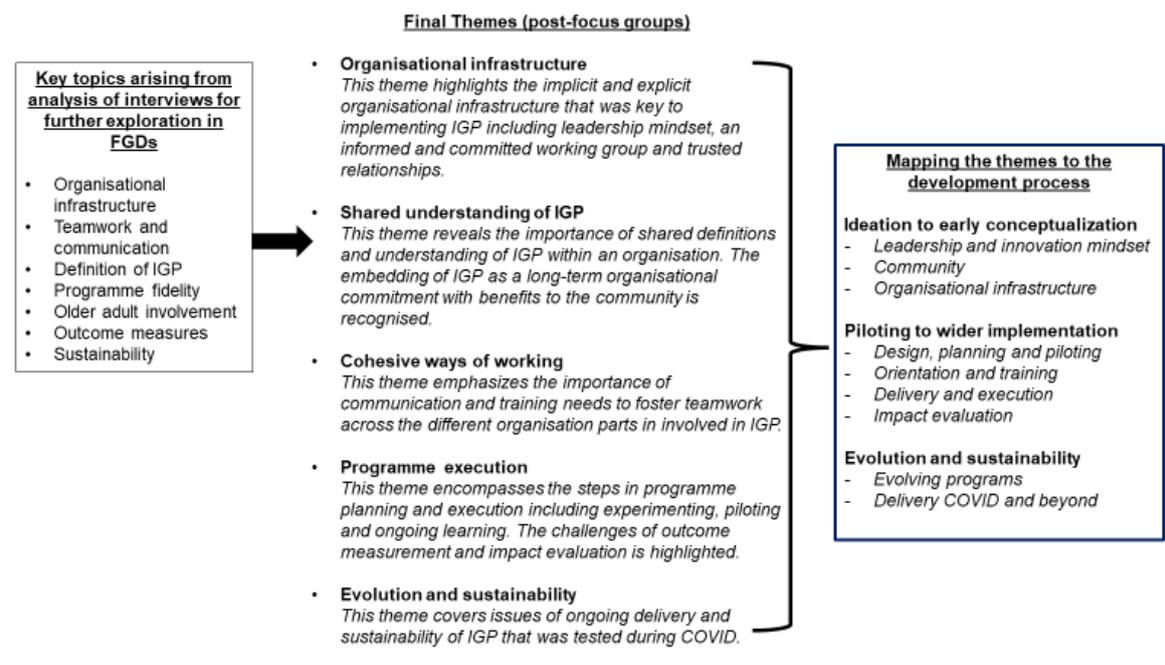
*Abbreviations:* ICC, infant and childcare centre.

## 2.3. Data Collection and Analysis

Data were collected through individual semi-structured interviews and focus group discussions in two phases from May to November 2021. The Griffith University's Intergenerational Care Research Report (Radford et al. 2019) was used to develop lines of enquiry exploring aspects of theoretical and operational fidelity and sustainability of the program. Phase One comprised eight semi-structured interviews and one group interview to explore participants' experiences, attitudes, perceptions, and beliefs regarding the program. The nursing staff requested to be interviewed as a group so they would feel more comfortable and could help those less proficient in English.

All interviews were conducted through a virtual Zoom meeting platform and ranged from 40 to 115 min with an average of 60 min. The lines of enquiry explored in the interviews are included in Appendix A. The focus groups ranged from 46 to 96 min. The focus groups and interviews were video- and audio-recorded with the consent of the participants. All interviews were transcribed verbatim and checked against the audio. The data collection generated 143 pages of individual interview transcripts and 45 pages of focus group transcription.

NVivo (released in January 2022; QSR International Pty Ltd. 2022) was used to facilitate analysis of all data collected. The interview transcripts were read several times to ensure familiarisation with the data and were coded by three members of the study team for recurring topics raised by participants. These topics were further explored in three focus group discussions in Phase Two. The key themes that were generated from the data were then mapped to the timeline of stages in the IGP development (Figure 1).

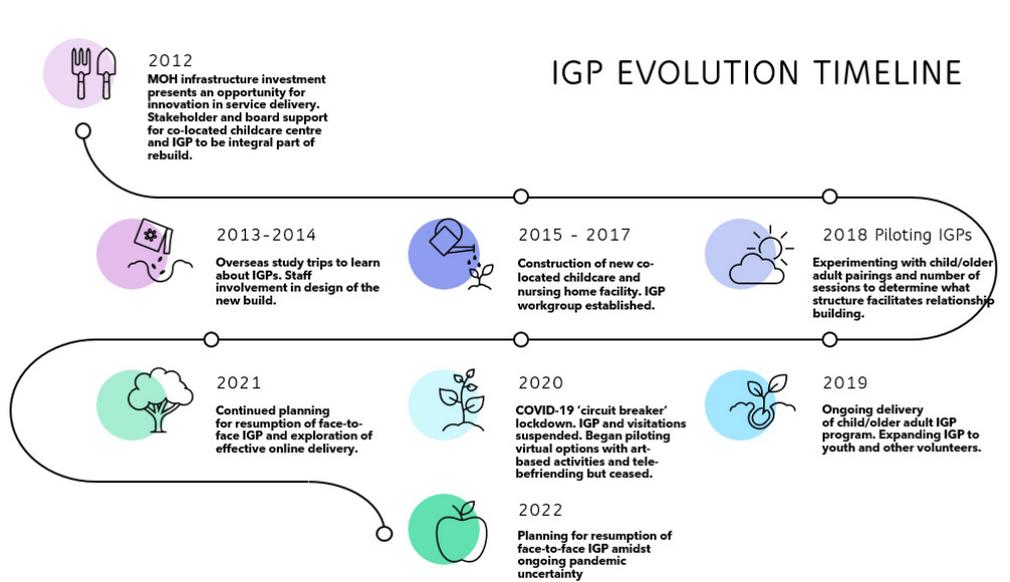


**Figure 1.** Analytic process highlighting key themes mapped to the IGP development process.

To ensure the trustworthiness of the study, evaluation of the credibility, dependability, and confirmability of the data were conducted (Korstjens and Moser 2018). To ensure credibility, triangulation of data was performed with the documents provided by the participants (Appendix B) and the use of multiple methods of data collection (Noble and Heale 2019). For dependability and confirmability, a detailed research log was documented throughout the entire development of the project (Nowell et al. 2017). This included all meeting summaries and field notes taken during the interviews and focus group discussions.

### 3. Findings

The analysis was guided by a timeline demonstrating the evolution of the SJH IGP from initial conception through to how it was deployed during the COVID-19 pandemic. Findings from the interviews and focus groups were mapped to reflect the three development phases in an IGP: (1) ideation to early conceptualization (theoretical fidelity); (2) piloting to wider implementation; and (3) evolution and sustainability. The key features are shown in the timeline in Figure 2 and discussed in more detail below.



**Figure 2.** Timeline of the development of the intergenerational bonding program at St. Joseph's Home, Singapore.

### 3.1. Opportunity: From Ideation to Early Conceptualization

Theoretical fidelity is concerned with identifying the permissible level of innovation adaptability at outset and identification of the core components of a program (Radford et al. 2019). This section highlights some key themes underpinning the early conceptualisation of the IGP at SJH drawing on the interviews with senior personnel.

#### 3.1.1. Opportunity plus Leadership and Innovation Mindset

An important context to the SJH IGP experience is the policy environment. The Singapore government has invested in infrastructure to augment Singapore's eldercare support system in the face of a rapidly ageing population (Tan et al. 2021). The Ministry of Health commenced nursing home renovation projects to expand capacity for the sector starting in the early 2010s. Around 2013–2014, to meet increasing demand, SJH was given the option to redevelop and expand their existing 115-bed site or, alternatively, to halt services and move to a new site. The decision to stay would involve a total redesign and new build to accommodate more beds.

SJH opted to take the latter option, viewing this as an opportunity to innovate the existing services offered by the nursing home, reflecting a particular growth mindset at the leadership level. The willingness to explore and try certain ideas lent itself to an environment that fostered innovation. This mindset was also grounded in strong principles and evidence. Importantly, the organization took the time (or indeed, had the luxury of time afforded by the new build) and invested in an evidence-based approach to introducing an IGP within SJH.

Key staff were sponsored on several overseas learning trips to Hong Kong, Amsterdam, the United Kingdom, and Australia to understand new nursing home designs, to understand the range of service models and programs, to review the evidence base and to contextualise these findings to the specifics of Singapore, its culture, population, and environment. The aim was to explore the idea of having many generations under one roof, whereby children and youth became part of the landscape of the home. A further consideration was the workforce—like many in the intermediate and long-term care sector, SJH faced stiff competition for skilled staff. This led to the conclusion that an integrated co-located infant and childcare facility within the grounds of the nursing home could have benefits not only for the social programming (which eventually became the IGP) for the residents, but to also help to attract staff to the nursing home through access to childcare onsite.

In addition to the innovation mindset and methodical evidence-based approach, a strong, trusted working relationship between the board of directors and the executive director was crucial to secure commitment and engage stakeholders to support the co-location model idea—a proposal that brought with it significant governance complexity and financial and other risks; however, these were outweighed by the benefits and connection to the core mission of the organization and the resident population.

“Our board of directors I think they certainly have a lot of faith in my boss. She’s been working as the ED for so many years and she’s very well known in our industry. You know so I think they have worked with her long enough to know that it’s not just going to be an idea, it’s most likely a good idea based on good principles, good evidence and they were quite supportive. They knew it was going to cost them a lot of money because a building this huge with all the integrated services etc., and all that, it’s going to cost them a lot of money. But I think they believed in it enough and as an idea when we pitched that, you know it’s going to elevate the quality of life for the residents, it’s going to be good for the staff. It’s basically a win.” (Participant 8, senior management)

### 3.1.2. Embedding an IGP within the Landscape of SJH and the Community

Early into the conceptualisation of the IGP, there was a shared understanding of IGPs as a long-term effort, not a one-off experiment, or a bounded program with a limited lifespan. Nor was it viewed as an added ‘activity’ simply to engage the nursing home residents. Reflecting on the broader mission and goals of the organisation, the central premise was that building relationships between older adults and young people/children should be a constant element in the older adult’s life:

“ . . . just like if we’re living with our parents, grandparents, we have multiple opportunities to interact . . . So, we knew that we wanted it to be very much part of the everyday life, everyday routine of the older person, of the younger person to have that kind of interaction.” (Participant 8, senior management)

Hence, the intention was to embed the IGP within the organisation and, to that end, there was no separate programming budget designated for IGPs. There was clear recognition that the IGP was run by SJH as one team comprising childcare teachers and nursing home therapists and that it would be incorporated within the existing services and programming, including utilising the existing workforce.

Over and above the benefits to the older residents at SJH, the leadership also looked outward at how IGPs could have benefits for members of the community through their engagement in voluntary activities with the residents. More holistically, SJH also saw IGPs as an opportunity to “forge a new narrative in ageing with the community,” that is, to educate and inspire the community on the ageing experience beyond the common stereotypes of older adults, and to explore how the young could better understand the older generations. This process invited the discussion on some aspects of ageing not often openly discussed such as sickness, disability, and death. For example, one participant spoke of informing prospective parents utilising the childcare facility about the need to feel comfortable about their children’s day-to-day engagement with the elderly who may present with various levels of functionality. In addition, teachers also believed that IGPs present an opportunity for children to talk about ageing and to foster respect for the elderly.

### 3.1.3. Workgroup (Organizational Infrastructure)

To move beyond ideation, a workgroup within SJH was established to further the goals of the IGP and lead the design, planning, implementation, and ongoing review of IGPs. Members included senior representatives from the ICC, the allied health services, and the Community Partnerships teams. An important decision was to include the Community Partnerships team as the vision was that future IGPs would expand to include children from the school volunteer group program and youth volunteers from various institutions

of higher learning. The workgroup was tasked with the visioning of the IGP structure, the oversight, and the planning. At a practical level, the workgroup engaged in debriefing at the end of each IGP run to highlight what could be improved for the next session. The cross-disciplinary nature of the team was important—as one participant noted, it “gave us a common language across different departments on how to plan.” (Participant 6, senior management).

In sum, the experience of SJH showed several key characteristics for moving from concept to implementation. The permissible level of innovation was predicated on a willingness to take risks within senior leadership, an innovative mindset, and a systematic methodological approach. A clear understanding was that the IGP should be embedded within the organisation, coupled with taking a long-term approach.

### 3.2. Steady State: From Piloting to Wider Implementation

This section explores how the organization actualised their initial vision.

#### 3.2.1. Design, Planning, and Piloting

Initially, the organization took an experimental approach to IGPs, adopting a variety of structured and ad hoc activities by leveraging on the co-location of the childcare and the nursing home facilities to create interactions between the two groups via a wide variety of activities, ranging from storytelling to cooking sessions, with random pairing of residents and children starting in 2017. Teachers and therapists soon observed that the children dominated the activities, with residents unsure of how to participate or interact. Consequently, the relationships between the generations did not appear to deepen as intended.

“We at first, we thought, oh you know that is what the IGP would be, we see us creating a lot of these kind of touchpoints and with various age groups and that would be good enough. But after doing that for a little while, we sort of then sat down as a team and reflected . . . are we getting the kind of interaction that we really want? Are we seeing that our elderly person is happier because of it? Are the children benefiting, like have their skills improved when they communicate with an elderly person because of it? We realised that these ad-hoc sort of multiple touch points was kind of not good enough for us, for what we really wanted.” (Participant 8, senior management)

The workgroup soon set “non-negotiable” elements after experimenting with a range of sessions from 6 to 10 sessions with two child–older adult pairs (from February 2018) and another 14 pairs in two runs in 2019. Staff observed that it took about four sessions to develop relationships. At the other extreme, 10 sessions were often disrupted because of changing medical conditions of the residents. The workgroup decided that all IGPs should:

1. comprise multiple sessions (6–8)—no “touch-and-go” activities;
2. be organised, structured, and coordinated, with a clear session plan and labour allocation;
3. feature champions identified for each program;
4. collect data on the outcomes of the IGP.

As the core outcome was relationship-building, these elements were considered non-negotiable as it was viewed that these would have the greatest impact on the quality and depth of interaction they were looking for.

Establishing the selection criteria of children and residents was critical. As set out in the IGP strategy plan, the criteria for selecting children were:

- Child must be 3 years or older;
- Demonstrates a willingness to participate in activities;
- Attainment of parental consent.

The criteria for selecting nursing home residents to participate were:

- Mild temperament (no history of aggression towards others);
- Shows interest in participating in the planned activities;
- Has functional ability to follow simple instructions and be physically involved in the session activities;
  - A willingness to interact with children;
  - Good sound tolerance—staff were aware that some residents may not tolerate sensory stimulation from the children.

The process of selection was systematic and collaborative. At each quarter, the staff assessed the whole cohort of residents and children for their suitability for the IGP. Teachers and therapists discussed how to match child–resident pairs based on language skills, temperament, etc.

Goals for the entire group and for residents and children, respectively, were established collaboratively between the teachers and therapists, for example, incorporating educational and developmental milestones for children and therapeutic goals for residents at the cohort level (relating to social, emotional, or occupational well-being). From the document review of session plans, it was evident that the session planning process had evolved over the years with structured templates including details of the layout, materials, steps of the activities, and labour allocation, in addition to documentation of the goals for children and the residents (respectively and combined) and post-session reflection. This demonstrated how the organisation ensured that the IGP included the core elements to ensure the consistency of IGPs.

### 3.2.2. Orientation and Training

An important element of an integrated approach to the IGPs was cross-team training. Key personnel such as childcare teachers and therapists were trained in eldercare and childcare respectively, to address any knowledge gaps on the older or younger populations. Childcare teachers attended in-house lectures on ageing, cognition, and impairment, and undertook immersion experiences in the nursing home and hands-on care for one resident. Similarly, therapists spent a week shadowing in the childcare centre and reported positive feedback after the training. Training pathways and a competency checklist were discussed for new teachers or therapists but were not implemented since there were no new teachers or therapists joining.

However, the interviews and focus groups highlighted the existence of training gaps. It was noted that supporting staff such as nursing staff or teachers needed alignment with the lead facilitator about session goals, and regarding specific facilitation techniques within the session. For example, some staff intervened earlier than the lead facilitator.

“For example, if the child and the elderly they just stare at each other. So I will be waiting . . . to see whether we can get things to be happen in an organic way whereas the teacher will be, boy why don’t you ask the uncle [the older adult] what he likes, what is the colour that he likes.” (Participant 1, nursing home staff)

It was clear that a “one-size-fits-all” approach to training was insufficient and the optimum level of orientation and training for staff in IGPs remains an ongoing issue for resolution. For example, one participant noted that delivering IGPs in practice could require a variety of approaches to working with older participants ranging from a more directive to a more hands-off approach for residents who preferred not to actively perform the required activities. The emphasis of the training, therefore, must be on flexibility and responsiveness of approaches on part of the facilitators.

“I don’t want them [other staff members] to help them with the children or elderly but it turn[s] out quite alright, some elderly would prefer the teacher to do, then they just sit passively and enjoy the session.” (Participant 1, nursing home staff)

### 3.2.3. Delivery and Execution

The delivery of the IGP incorporated a wide variety of intergenerational activities including expressive art activities, music therapy, physical activities, and storytelling. Each program comprised 6–8 weekly sessions.

Staff prepared both generations by sharing knowledge about the other generations to set reasonable expectations. For example, teachers explained to the children the diversity of older adults, highlighting hearing or visual difficulties in some older adults, and they asked children to flag signs of discomfort among older adults to staff. Similarly, therapists explained to the older adults aspects of children's behaviour. It was noted by staff that information retention was challenging for some residents with dementia.

Overall resources were incorporated in the routine operational budgets, including workforce, budget, and physical environment. Workforce was mostly sufficient. Main program facilitators were teachers, nurses, and therapists. Some staff indicated that more labour would help with facilitating bigger groups and for observation-based program evaluation. The budget was deemed appropriate for activity materials. The organization had appropriate venues on premise but took time to identify the appropriate location, considering how far residents move from their residence and whether these were sufficiently quiet for participants to stay focused on the activity. Specific seating arrangements were explored to align with the eye level of the children and wheelchair-seated residents.

A specific issue for IGP implementation in Singapore relates to its multi-ethnic multi-lingual society. Language barriers between IGP participants were identified as a notable challenge during initial piloting by a few participants. Children spoke mainly English, while most residents did not. As a result, communication between IGP participants needed to be translated and instructions given in more than one language.

“... they [the elderly] don't really speak English but both of the kids are very good with their English. They are terrible with their Mandarin. The elderly can only speak Mandarin and Hokkien [a Chinese dialect] so I have to speak English for instruction then after that, I will speak Mandarin or Mandarin then English ... there are times that even the elderly don't understand what's the Mandarin term ... then I have to explain in Hokkien.” (Participant 1, nursing home staff)

The impact of these language differences on the capacity for relationship building as well as the program flow were considered by the working group and pair-matching based on spoken language capability was then prioritised.

Lastly, it was sometimes difficult for children and some residents with cognitive impairments to interact spontaneously and simultaneously. The staff addressed this via careful activity design, and reflection on the skills required by staff to facilitate interactions in these circumstances.

### 3.2.4. Impact Evaluation and Other Challenges

Through the interviews and focus groups, it was apparent that staff shared the organization's vision and purpose of the IGP to “build relationships” between young and old. The benefits of the IGP were reflected unanimously by staff sharing positive behavioural changes. Staff cited examples of residents with dementia remembering their child partner's name for weeks after the program ended or purchasing snacks for the children outside of the sessions.

Such feedback tended to be sought by more informal means—therapists asked for verbal feedback from residents. Teachers received feedback from parents who noted their children sharing about their new elderly partner at home.

While these benefits of IGPs were observed and captured anecdotally by the SJH workforce in terms of the impact on the elderly and children, the need for more objective measures was identified. “We need to be able to show a little bit better evidence that it works so that we can encourage other people to do it the same” (Participant 8, senior management). After initial exploration, the team identified the Bradford Well-being Profile ([Bradford](#)

[Dementia Group 2008](#)) for residents and the Leuven Scale ([Laevers 2005](#)) for children as appropriate measurement tools, but the subsequent implementation was disrupted by the COVID-19 pandemic.

The work on evaluating and measuring impact is ongoing, though some staff noted concerns around additional workforce needed to conduct a formal evaluation. A key focus for the workgroup is to identify a means of measuring the relationship quality between intergenerational participants as an outcome. As well, there is the need for a more holistic evaluation that includes economic outcomes (cost analysis) and workforce impact.

In short, as demonstrated above, the implementation process of a real-world, principle-driven IGP is complex. Key elements to actualising the initial vision included: the systematic approach by experimenting with program structures and types of activities before wider implementation; attention to detail by careful pairing of intergenerational participants and session planning; as well as close communication and collaboration among staff in both childcare and residential care.

### 3.3. Evolution and Sustainability

#### 3.3.1. Evolving Programs

The IGP has become integral to SJH from the leadership to throughout to the organization. Those involved in the IGP (beyond the workgroup) were engaged in thinking about continuous improvement to expand on the original vision and ensure the program's sustainability beyond the current IGP. For example, Participant 6 (senior management) envisioned using specific tools to evaluate and document outcomes specific to the core element of the IGP, beyond meaningful interactions, while balancing the structure and organic nature of social interactions.

“... the long-term goals move beyond just having meaningful interaction eh. It's also really being concrete about what these meaningful interactions are. What is the, what are some of the benefits to the younger generation, how does IGP form a kind of therapy and care for both generations, how because now it is mainly through interaction... I feel it is a bit too general, too broad, and too fluffy. So, I will say the long-term vision is to see how to concretise some of these things, doesn't need to be just one, but multiple areas. How it can also be semi-structured and can occur more organically.” (Participant 6, senior management)

The review and feedback of the IGP evolved from micro-level adjustments (for example, changes to the physical settings used during programs) to a focus on broader goals of the program and long-term vision. For example, one participant highlighted the importance of engaging residents in future program design “So maybe we can even I mean in future consider getting the residents to be involved in the planning, like for example what is their interests and what do they think about?” (Participant 1, nursing home staff).

#### 3.3.2. Continued Delivery beyond COVID Disruptions

The COVID-19 pandemic forced SJH to confront the issue of sustainability. Nursing homes in Singapore were settings of high risk during the pandemic. Therefore, the IGP was suspended due to safety restrictions that limited face-to-face interactions between residents and visitors, including children in the childcare. However, in recognition of the value and benefit of the IGP to elderly residents, particularly during the pandemic when visitors were heavily restricted, SJH persisted with the Ministry of Health to be able to conduct small-scale IGPs involving 4 pairs taking place in June 2021 in compliance with safety management protocols.

Videoconferencing was used as an interim measure despite disruptions and increased general staff workload, while the workgroup explored the possibility to resume face-to-face programs. Virtual story-telling sessions with residents and childcare children were conducted but soon ceased as staff observed that the goals of forming meaningful relationships were not being achieved. Some barriers were technology-related in nature, such as poor audio quality. The nature of the interaction also changed to group-level

interactions on Zoom which were felt by staff to be distant and impersonal. As a result, children easily disengaged from the session when the interaction became disjointed.

The disruptions brought by COVID highlighted the vulnerability of programs that relied on face-to-face interactions. The continued discussion and exploration of alternative methods signalled perseverance from the staff and management to continue delivering the IGP.

In short, the evolution and continued delivery of the IGP reflects the long-term vision and thinking beyond the current state with staff invested in contributing to the feedback review process at a micro-level and at a broader level. The perseverance mindset to continue to develop the IGP to benefit the socially isolated residents during COVID demonstrated the strong value of IGPs within the organization.

#### 4. Discussion

This study aimed to contribute the experience of an IGP in an Asian context to the body of literature by presenting the case study of a co-located model of an IGP in Singapore. Through interviews and focus groups with key staff, key elements of successful implementation of innovative practice in a health and social care setting were highlighted. These elements included: strong leadership support, the vision to take a long lens of planning and implementation, and an organisation's culture of wanting to do well which resulted in a systematic methodical approach to piloting and improving implementation and integration of the IGP into the landscape via close communication and collaboration across the organisation. These elements led to continuing evolution of the program as well as continuing delivery amidst COVID. This case study of an IGP illustrates that the implementation of IGPs is a fluid and dynamic process that relies on strong evidence-based design and evaluation from a culture that is not well-known in the literature of IGPs.

##### 4.1. Leadership Support to Build a Sense of Community

Strong leadership support was evident in this case study and was well-perceived by staff members. The leadership of this organisation demonstrated transformational leadership and implementation leadership that supports implementation of new ideas (Aarons et al. 2014). The leadership shared a clear, value-based vision and allowed flexibility for staff to solve implementation-level issues. The organization's IGP workgroup used implementation-focused strategies, which included recruiting like-minded workforce, allocating resources, and regularly gathering and reviewing feedback. The value–innovation fit was theorized to contribute to how much individual staff members perceived the implementation as an organisation priority, which in turn contributed to the effectiveness of implementation (Helfrich et al. 2007). Management support is critical in implementing a co-located model IGP. It requires providers to navigate governance regulations for older adult care and childcare sectors and supplementing staff training to care for populations outside their typical care (Radford et al. 2019; Steward et al. 2021).

A strong sense of community was observed among the staff. Staff shared a sense of responsibility in bridging generations and knowledge and skills through staff cross-training and the cross-team workgroup discussions. The degree of community capacity has been theorized to improve the sustainability of IGPs (Jarrott et al. 2011) and needs to be further evaluated.

In summary, the organisation's leadership's vision, operational support, and alignment with organisational values, and implementation flexibility promotes a strong sense of community.

##### 4.2. Applying Contact Theory

The organisation's aim of creating a new narrative around ageing via IGPs aligns with intergroup contact theory which describes five tenets of promoting positive intergroup interactions: authority support, equal status, cooperation, common goals, and opportunities of friendship, and explains how contact facilitated through intergenerational activities could

address prejudice towards generations (Jarrott and Smith 2011; Pettigrew 2008). This case study demonstrated some alignment with these tenets albeit noting some inconsistency: the workgroup and staff support of the program formed the authority support; activities were planned to actively engage both the young and old, for them to cooperate towards a common goal such as creating a craft together; and some elements of the activities such as self-introduction and sharing of interests fostered friendship. On the other hand, it was not clear how the social environment was shaped to ensure equal status when some residents required assistance and whether aiding older adults reinforces ageist stereotypes toward older adults. Opportunities for friendship were not consistently highlighted in session plans.

Mediating factors for positive and negative interactions explained by contact theory could inform the mechanism of change in the IGP (Pettigrew 2008). Affective factors including empathy and addressing anxiety are more impactful on attitude change than cognitive factors such as knowledge of the other generation (Pettigrew 2008). This highlighted a gap in the current staff training and briefing for children in this case study which focused more on cognitive skills such as knowledge about the other population and facilitatory skills rather than affective factors.

Recent evidence has shown that promoting participant-pairing and person-centred strategies were associated with increased intergenerational interaction (Jarrott et al. 2021a). In the current case study, staff implemented participant pairing but not person-centred strategies specifically to IGP. Staff mentioned the future direction of engaging participants in program design beyond catering to preferences, as is the current practice.

In summary, organisations should evaluate and strengthen the program based on theories and evidence to explore the mechanisms of change and mediating factors.

#### 4.3. Relationships beyond Program Continuation

COVID-related disruptions prompted discussion on the core value of IGPs in the current case study. This organisation focused on intergenerational relationships beyond program continuation. This mindset echoed Azevedo and Sánchez (2019) who analysed the sustainability of four IGPs in Portugal and argued that:

“... understanding the sustainability of IP [intergenerational programs] solely on the basis of securing continuation of the program is insufficient to capture sustainability fully ... Therefore, one lesson to be learned is that IP sustainability should be dealt as a complex construct deserving a more elaborated and systematic approach.” (p. 11)

The quality of the intergenerational relationship is crucial in understanding how and why intergenerational programs effect changes in the health and well-being of participants (Feyh et al. 2021; Jarrott et al. 2021b). Furthermore, relationship building is emphasised in person-centred practices (Fazio et al. 2018). How the quality of relationships develops over the course of IGPs should be central to the discussion of sustainability of intergenerational bonding programs. To the best of our knowledge, there is limited discussion on the complexity of IGP sustainability and limited tools to capture the quality intergenerational relationships in the existing literature.

#### 4.4. Limitations

This report on the implementation of an IGP in Singapore has a number of limitations. Nurses requested a group interview to feel more comfortable rather than the one-to-one interviews that were offered to all participants. Thus, the depth of information and dynamics may have affected the information gathered from the nursing staff.

The IGP participants (nursing home residents and children) were not included in this study as the focus was on the implementation process. While participant perspectives are important for program evaluation, the nursing staff, managers, teachers, and key individuals provided insights about the complexities of implementation from early idea to

execution. Any evaluation of the program in the future should include the views of nursing home residents and others such as children and parents.

## 5. Conclusions

Within an Asian context, intergenerational relationships have important community and cultural value, and intergenerational programs are one way for communities to strengthen the relationships between non-familial generations. This case study of an IGP in a co-located (shared site) model in Singapore has shown that successful integration of an IGP from ideation to implementation is a complicated process, and highly dependent on many factors. In this case, national policy on nursing home infrastructure provided an opportunity for SJH leadership to innovate with respect to the core needs of nursing home residents as well as to use an IGP to “forge a new narrative in ageing with the community.” Importantly, IGPs featured as an embedded part of the organisation and not an “add-on” activity. In addition to leadership and long-term vision, clear parameters around the type and nature of IGPs were continually emphasised and reviewed in a structured way by a cross-team workgroup. What emerged for SJH through the COVID-19 experience is that ensuring the sustainability of IGPs relies not on altering the delivery mechanism but on a central focus on whether the core goal of the IGP is being met: in this case, the relationship quality. Consistent focus on the relational nature of IGPs should be central in the implementation and sustainability of IGPs. Future research could focus on how the intergenerational relationship develops and how to capture and measure the quality of relationships as they develop through the IGP process, to better understand the nature of IGPs. The implementation of IGPs can be problematic and requires considerable investment and commitment. Hence, this report hoped to provide important guidance for new providers considering implementing IGPs within a co-located (shared site) facility.

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## Appendix A. Interview Questions

1. Origins of IGP
  - Where did the idea come from? How did they make it happen?
  - Were you involved in the ideation of the IGP at SJH?
  - If so, what was your involvement?
  - Where did the idea come from?

- What were the responses of the various stakeholders? (Government, leadership board, staff, parents and families) What was some help/aid provided by these stakeholders?
  - How was the process like to get the approval from the various organizations, e.g., Ministry of Education or Ministry of Health?
  - What are the facilitators and challenges faced during the planning of IGP (e.g., financial issues, approval from board)?
2. Vision
    - What is the vision for the IGP: short-term/long-term?
    - How long do you foresee such a program to be carried out when this program was first introduced?
  3. Session plans
    - What are the key objectives that you introduced to your staff the IGP should strive to achieve before they plan for sessions?
    - What are the key objectives/goals that you strive to achieve when planning for sessions?
    - Were there specific goals for individual children and residents? Who creates the sessions plans—are they a combined (nursing home residents and children) or separate session plans? How are session plans developed—is there a framework the session plan follows?
    - How are the staff trained to deliver the IGP?
  4. Delivery of program
    - What are the types of programs that have been done during this IGP?
    - Do the sessions go according to the session plans? What are some common challenges faced?
    - What are some of the changes made in response to these challenges?
    - Was the budget sufficient to support the program? Was the number of staff adequate? Was the duration and number of sessions sufficient?
    - How was the environment set up for each session?
  5. Recruitment of participants
    - What is the demographic of the residents/children?
    - Were there any participants that have declined to participate in IGP? What are some reasons that participants do not want to participate?
  6. Evaluation
    - Was the IGP able to achieve its intended goals?
    - How do you evaluate the effectiveness of the program? (teacher's comments, observation)
    - What is some feedback of the IGP from the participants and the other stakeholders?
    - What benefits have you seen? Were they sustained in the long term?
  7. Sustainability
    - How has the current program evolved from the original?
    - How has COVID-19 affected the program and the planning of future IGPs? What were some of the challenges faced? For example, were there measures that have to be followed during the program?
    - What do you hope the IGP at SJH will achieve in the future?
  8. Conclusion
    - Is there anything else that you would like to comment on that I have not already asked you about?

### Appendix B. Document List

No.	Document Title	Publication Date	Author	Summary of Document Type and Objective
1	SJH IGP	1 April 2020	SJH IGP Workgroup	Definitions and criteria for SJH IGPs
2	One Tribe, One Space—The art of authentic inter-generational interactions	NIL	NIL	Presentation about IGP
3	IGP Workgroup Meeting 21 October 2020	21 October 2020	SJH IGP Workgroup	Planning of 2021 IGPs
4	Minutes of IGP Workgroup Meeting on 8 April 2021	8 April 2021	SJH IGP Workgroup	Reviewing of 2021 IGPs for Q3 and Q4
5	Strategic planning-intergenerational programs 2020–2021	NIL	NIL	Sharing of common definitions across all parties and the creation of macro IGP calendar
6	IGP calendar 2020	NIL	NIL	Amendment of strategic planning and IGP calendar
7	Intergenerational Programs at SJH 2020–2021	NIL	NIL	Breakdown of sharing of IGP strategic planning document with staff
8	The impact of an intergenerational program on the well-being of persons with dementia	NIL	Participant 8	Poster to show benefits of intergenerational expressive arts program trialled at SJH
9	The impact of an intergenerational program on the well-being of persons with dementia	NIL	Participant 8	Paper featuring the impact of an inter-generational expressive arts program designed for residents with dementia and children from ICC
10	Questionnaire	NIL	NIL	Rating of the child participants
11	Learning Objectives for children	NIL	NIL	List of learning objectives for children
12	Intergen phases 2018–2019	2019	Participant 1	Details of 3 phases of the art program in IGP
13	Inter-generational Art Experiential Program 19 September–28 November 2018	2018	NIL	Includes the overview and objectives of the art program in IGP
14	Intergenerational Art 2nd run in Year 2018 (iGen Art)	2018	NIL	The objectives, session plans, and outcomes of each art program in IGP
15	iGen Expressive Art @ Level 2	2019	Participant 1	Session plan
16	Intergen comments from teachers	NIL	Teachers from ICC	Observation comparing pre- and post-session
17	Intergen pre and post feelings sample for session 1	NIL	NIL	Observation on feelings
18	Uncles Aunties Feedback	NIL	NIL	Feedback from the residents
19	Pre and post feeling charts June–July	NIL	NIL	Feelings chart of the children in each session
20	Pre and post feeling charts June–July raw data	NIL	NIL	Subjective mood of the children
21	InterGen Phase 2: April–May 2019	2019	Participant 1	Objectives, outcomes, session structure, and plan of art therapy IGP
22	iGENEA: Intergen-Expressive Art Phase 2 April–May 2019	2019	Participant 1	Brief Objectives of phase 2 IGP

No.	Document Title	Publication Date	Author	Summary of Document Type and Objective
23	Feedback	2019	Participant 2	Feedback from gym tonic staff to intern to improve on sessions
24	Intergenerational Exercise and Health Promotion Lesson Plan 1–6 + Sports Day	Nov 2019–Jan 2020	Intern, reviewed by Participant 2	Activity, objectives, structure of lessons
25	Project Grand Friends Run 2: Lost cultures	2020	NIL	Invitation to volunteers to join project on online calls with SJH residents

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