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Perceptions of Intergenerational Living among Older Adults Residing in Subsidized Housing Developments in Hong Kong

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ABSTRACT



This study explores whether there are differences in the perception of intergenerational living between three age categories under the umbrella term of “older adults,” specifically among the emerging old (aged 50–64), young-old (aged 65–79), and old-old (aged 80 and above). While survey ($n = 437$) results showed all three age categories had a similar perception of “intergeneration” and its perceived benefits, emerging old respondents were found to be more open to various forms of intergenerational living compared to the other two age categories. The findings of this study can inform future housing solutions to better cater to the diverse needs of the older population.

KEYWORDS

Age group differences; Hong Kong; intergenerational; older adults; perceptions; subsidized housing

Introduction

Like many countries across the world, Hong Kong is currently grappling with challenges associated with a rapidly aging population. Between 2011 and 2021, the proportion of older persons aged 65 and over in the total population rose from 13% in 2011 to 20% in 2021 (Census and Statistics Department, 2022) and is projected to further increase to 31.9% by 2038 (Wong & Yeung, 2019). The demand for elderly support resources and public expenditure relating to care services is expected to surge, posing challenges to service providers and policymakers alike (Elderly Commission, 2017). The availability of informal support for older populations has largely been dependent on their living arrangements; those living in close geographical proximity to relatives and family members are more likely to receive assistance for moderate care needs (Lee, 2004). Shrinking average household sizes and a dwindling working population mean there would be fewer family members and caregivers to provide care and support to older adults, adding to the demand for formal and institutional services

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(Elderly Commission, 2017). This trend of increasing care needs and decreasing availability of familial and formal support necessitates developing other informal sources of support for older adults.

In light of the declining availability of familial support, community support networks at the neighborhood level can potentially serve as the first port of call to respond to various needs and provide basic assistance, such as meal preparation, housekeeping, shopping, and medical appointment accompaniment (Bai et al., 2020), which can help avoid or delay the seeking of more formal sources of care. The recent COVID-19 pandemic has further underscored the need to strengthen community support networks to bridge some of the gaps that formal services and institutions have neglected or lacked the capacity to fill. The development of robust community support networks will require the involvement of members from different generations.

There has been renewed interest in the concept of building intergenerational solidarity in Hong Kong (Lou et al., 2015; Sun et al., 2019, 2022). “Intergeneration” can be defined as some form of reciprocal engagement (Vanderbeck, 2007) between people of different generations who may not necessarily be biologically related. The term “solidarity” in intergenerational solidarity refers to the willingness to provide mutual assistance and exchange of support across different age groups (Rein, 1994; Roll & Litwin, 2013; Spicker, 2003). Ng (2008) noted voluntary intergenerational contact beyond the immediate family is uncommon. Network analyses examining age-composition of social networks found that non-familial social networks tend to be strongly age homogeneous (Hagestad & Uhlenberg, 2005; Vanderbeck, 2007). Different generations are likely to grow apart from each other due to the tendency to associate exclusively with people within the same generation, thereby excluding other age groups from one’s social network. Age-integrated social networks can provide opportunities for participating in the community, exchanging of information, experiences, and support, developing personal bonds, and improving well-being. The value of social networks lies in the access to resources and support embedded within the connections (Kadushin, 2004).

Expansion and diversification of one’s social network will require an environment conducive to the development of relationships and structures that promote mutual interaction. It has been noted across studies that age segregation can take on spatial forms, occurring in everyday activity and recreational spaces, where particular sites have either been prescribed or have acquired age-identities over time, inadvertently discouraging contact between different generations (Pain, 2001; Vanderbeck, 2007). Promoting age integration would involve encouraging age heterogeneity by bringing people of different ages together by providing/increasing opportunities for

intergroup contact. Allport's (1954) intergroup contact theory notes that intergroup contact can yield positive effects, such as reducing prejudice and promoting tolerance and acceptance between different groups. Studies have shown a negative correlation between contact and prejudice, where greater contact can be routinely associated with less prejudice (Pettigrew et al., 2011). Regular intergenerational interactions can contribute to positive attitudinal changes (Park, 2015). Increased frequency of contact enabled by intergenerational practice can lead to improvements in attitudes and perceptions, which can, in turn, help to reduce segregation between age groups and foster social connectedness (Krzeczkowska et al., 2021).

One of the key determinants of social network formation and mutual support provision, particularly where older adults are concerned, is spatial proximity (Enßle et al., 2022; Heylen et al., 2012; Hoff, 2006). Under social network theory, propinquity, or the state of being in the same place at the same time, has been used to explain the tendency of individuals to be associated if they are in geographical proximity with each other (Kadushin, 2004). Where family support is unavailable, inadequate, or inaccessible, older adults would tend to look to alternative forms of informal support from proximate sources, such as neighborhood networks before resorting to seeking formal care (Bai et al., 2020; Cantor, 1979; Enßle et al., 2022). As people age, their extent of social contact is more likely to be limited to residential and neighborhood settings due to various health, mobility, or structural constraints hindering access to networks over greater distances (Enßle et al., 2022; Lee, 2004). Previous research found neighbors to be favorable sources of support precisely because of their spatial proximity and capacity to provide immediate assistance (Chen et al., 2016; Chui, 2008; Enßle et al., 2022; Wenger, 1990). The importance of developing and strengthening social networks within neighborhood settings has been similarly echoed in the Chinese proverb of “遠親不如近鄰 (*yuan qin bu ru jin lin*)” [a good neighbor is better than a distant relative] (Miao et al., 2022). This calls for further exploration of how intergenerational practice may be incorporated in residential and neighborhood settings.

The term “intergenerational housing” can be used for residential developments or housing schemes that support and facilitate intergenerational interactions (van Vliet, 2011). While overseas examples of intergenerational housing can take on many forms, accommodating a wide range of living arrangements (e.g., co-housing, co-living), the housing portion of intergenerational housing is secondary. The key feature of intergenerational housing lies in the spatial and programming opportunities intentionally created for different generations to gather and interact within residential and neighborhood settings, where different age groups are able to participate and build relationships in the community (Cushing & van Vliet, 2016;

van Vliet, 2011). Overseas examples of integrating intergenerational practice within housing have demonstrated success in encouraging community participation, strengthening neighborly relations, and developing community support networks (Pascual, 2019; Perez, 2020; Seet & Ee, 2020; Yap, 2019). One example is Humanitas, an intergenerational housing scheme in the Netherlands where 6 students are provided with free accommodation at a care home in exchange for spending time with the 166 older adults residing there (Arentshorst et al., 2019; Landi & Smith, 2020). Humanitas is not simply providing a place where people of different age groups can live together. Rather, it has created an intergenerational community where older and younger people can share experiences together, build connections, and support each other (Arentshorst et al., 2019). Another example is Kampung Admiralty, an intergenerational housing concept in Singapore, where public housing for seniors is embedded within a larger hub with amenities, such as childcare, healthcare, and eldercare facilities that can facilitate intergenerational bonding in a residential setting (Azzali et al., 2022; Lim, 2022). Spatially, the childcare center and Active Aging Hub for seniors are intentionally co-located adjacent to each other due to the potential to gather young and older generations into contact with one another and interaction opportunities such proximity presents (Lim, 2022). Programmatically, the operators of both facilities have worked to explore and plan joint activities to leverage the synergistic potential in bringing different age groups together (Lim, 2022; Samant & Bingham-Hall, 2019). As seen in the examples, intentional fostering of quality intergenerational interactions, community engagement, and mutual support through both purposefully designed built environment and services provision differentiates intergenerational living from conventional multigenerational living arrangements. The distinction between the terms of “intergenerational” and “multigenerational” lies in the former’s “inter-” prefix, which suggests a sense of sharing and reciprocity, highlighting a “relational” aspect that does not exist in the latter (Thang, 2020). Given the success of intergenerational housing in international contexts, it is worth exploring its adaptation potential in Hong Kong as one of the ways to address emerging challenges resulting from an aging population. A preliminary step to determine the preferable form of intergenerational living in Hong Kong is to study the perceptions of intergeneration and preferences for intergenerational housing of older adults in the city.

There are limited studies on the perceptions of the concept of intergenerational, intergenerational programs, and intergenerational housing. Most existing research focused on the experience of participating in intergenerational programming, with generally positive benefits reported and most people being in favor of the concept (Leong et al., 2022; Murayama et al.,

2019; Teater, 2016; Wang, 2023; Weintraub & Killian, 2007). Leong et al. (2022) examined older adults' perspectives of intergenerational programs in Singapore. According to the study, most older adults reported feeling actively involved and socially integrated, having experienced emotional support and social acceptance, and noticing positive impacts on physical and cognitive functioning after participating in intergenerational programs (Leong et al., 2022). The study observed the relationships formed between participants of different age groups were characterized by companionship, mutual care, trust, and affection. Intergenerational programs offer opportunities for younger and older generations to participate in a variety of educational, social, and recreational activities for mutual benefits and can be seen as a tool for encouraging active aging (Leong et al., 2022). Regarding perceptions of intergenerational programs, one study conducted in Australia found program participants' understanding of the beneficiaries and extent of benefits from participating in intergenerational programs can vary (Kenning et al., 2021). However, most participants of intergenerational programs agreed that the programs can help increase connection and support, improve health and well-being, increase understanding and friendships across generations (Kenning et al., 2021; Weintraub & Killian, 2007).

With regards to the literature on older adults' perceptions of intergenerational housing, there is currently no research, to our knowledge, exploring the topic. There are, however, studies examining older adults' perceptions and preferences regarding housing, particularly on the differences across various age groupings. Some studies conducted in the Western context operated on the assumption that housing preferences, care expectations, and behavioral patterns of future older adults differed from current older adults (i.e., people aged 65 and above) due to differences in experience, abilities, and lifestyles resulting from improved socioeconomic conditions and greater access to opportunities (Filipovič Hrast et al., 2019; Jong et al., 2012; Kramer & Pfaffenbach, 2016). Previous research demonstrated heterogeneity among older adults, with findings showing that perceptions and preferences on housing can differ across age groups under the umbrella of "older adults" (Abramsson & Andersson, 2016; Jong et al., 2012; Kramer & Pfaffenbach, 2016; Lu, 2021; Yuen et al., 2019). Less is known about whether differences across older age groups would be similarly observed in the Asian context. While there are studies in Singapore showing some age group differences amongst older adults regarding housing perception and aspirations (Yuen et al., 2019; Yuen & Cheong, 2019; Yuen & Kong, 2019), further research is needed to investigate age group variation in housing perceptions, particularly toward intergenerational housing in Hong Kong.

In Hong Kong, the "emerging old" or "soon-to-be old," defined as aged between 50 and 65, constitutes the largest age group in the city (Elderly

Commission, 2017). It is anticipated that future older adults will have higher life expectancies, owing to higher educational attainment, improved financial capabilities, better standard of living, and increased access to quality healthcare services. Future older adults in Hong Kong are also more likely to have higher expectations of the quality of housing and care services and would expect more diversity, flexibility, and autonomy in housing choices (Elderly Commission, 2017). Recognizing individual housing preferences can vary widely across older adults underscores the importance of providing diverse housing options that consider the different needs and preferences of current and future older populations (Filipovič Hrast et al., 2019).

Acknowledging the diversity within the older population and distinguishing between different age groups will allow us to scrutinize whether age has an impact on housing perception and preferences (Jong et al., 2012). The development of appropriate housing that will support aging in place and cater to a diverse group of older population will depend, at least partially, on understanding the differences in housing perceptions and preferences among older adults. As such, the research objective is to examine current and future older adults' perceptions of the concept of intergenerational, acceptance levels of, and willingness to live in intergenerational housing in Hong Kong. Investigating this topic is important in Hong Kong as few studies have addressed differences in housing perceptions and preferences among older adults in the Asian context (Lu, 2021; Yuen et al., 2019). This study attempts to explore whether there are differences in attitudes toward intergenerational housing specifically among the older age categories (Oswald et al., 2011) of emerging old (aged 50–64), young-old (aged 65–79), and old-old (aged 80 and above) in Hong Kong. The comparison of different older age groups' attitudes toward intergenerational housing in Hong Kong conducted in this study will not only add to existing literature but also inform the development of alternative housing options catering to the varying needs and expectations of older adults going forward.

Research methodology

Survey design

The research adopted a survey research design to investigate the perception of the intergeneration concept, acceptance levels of and willingness to live in intergenerational housing amongst residents of subsidized housing in Hong Kong due to the Hong Kong Housing Society's¹ (HKHS) corporate initiative to explore the feasibility of incorporating the concept of intergeneration in their housing developments. The study was conducted over the course of five weeks between August and September 2021. With HKHS'

collaboration and coordination, 11 HKHS housing estates with varying completion years (1960–2010s), of different schemes (e.g., Public Rental Housing, Subsidized Sale Flats), and located across eight districts (Central and Western, Eastern, Kowloon City, Kwun Tong, Kwai Tsing, Sai Kung, Tsuen Wan, Yau Tsim Mong) were selected as survey distribution sites. These sites were selected due to a combination of factors, including but not limited to, resources available, time constraints, approvals, estate management readiness, and district distribution. A questionnaire in both Chinese and English was designed for this study. A financial incentive in the form of a supermarket coupon valued at HK\$50 (~US\$6.50) was given to each survey respondent. Booths were set up at each estate for survey collection and issuance of coupons. A total of 2,800 questionnaires were distributed randomly through resident's mailboxes across the selected housing estates, with another 350 questionnaires distributed at the booths set up at the estates. Due to questionnaires being largely distributed through resident mailboxes instead of conducting face-to-face surveys, there was little control over the age of the respondent. For purposes of this study, only data collected from people aged 50 and above and living in subsidized housing schemes were analyzed for discussion. The survey was designed to understand the preferences, motivations, and willingness to participate in intergenerational activities and live in intergenerational housing. The entire survey consists of five sections (1. General demographic data, 2. Current Housing/Surroundings and Satisfaction, 3. Community Engagement, 4. Health Status, and 5. Expectation and Attraction of Intergenerational Housing) with 44 questions in total. The first section collected basic demographic information from respondents, the second invited respondents to rate the importance of various facilities and services at their current housing estates, the third examined residents' level of community participation, the fourth invited respondents to rate various aspects of their current health, and the fifth section mainly revolved around perceptions and preferences regarding the concept of intergeneration and intergenerational housing. Given that the key elements of intergenerational housing examples reviewed involved providing spaces (facilities) and activating spaces (programming and services), satisfaction with current provisions and community participation levels would be explored as part of the questionnaire. While the focus of the discussion will mainly be on the last section of the questionnaire on intergenerational housing perceptions, results from other sections will be referenced as needed. A basic definition of intergenerational housing was provided under the "Expectation and Attraction of Intergenerational Housing and Co-living" section of the questionnaire, where intergenerational housing was defined as "A form of co-living that deliberately arranges residents of different age groups to be neighbors to

foster social interaction across generations and community inclusion. For example, common living room, living on the same floor, preparing dinner together at regular intervals, organizing community activities together.” Under this definition, respondents were likely to see intergenerational housing specifically as a form of co-living arrangement requiring a high level of proximity. Question types included multiple-choice, open-ended, and Likert scale questions. Two key questions regarding the acceptance level of various forms of intergenerational living and willingness to live in intergenerational housing were included in the “Expectation and Attraction of Intergenerational Housing” section of the questionnaire. Question types included multiple-choice, open-ended, and Likert scale questions. Age category was used as the primary demographic variable in the analysis to explore if there were any significant variations in perceptions and attitudes amongst older adults of different age groups. This is based on the assumption that perceptions and preferences may vary with age, and that people of the same generation would be more likely to hold similar views and expectations due to having comparable experiences under the same socio-cultural context (Yuen et al., 2019).

Data analysis

The survey data were digitized into Microsoft Excel Database and processed with R (R Core Team, 2022) for further cleaning and analysis. A combination of analysis methods was used. Most of the questions in the survey adopt either a multiple-choice format or 5-point Likert scale, the results of which are categorical or ordinal data. Non-parametric tests that do not assume normally distributed data were selected. Pearson chi-square test for independence was used to test for association between two categorical variables, with a follow-up Cramer’s V test applied to statistically significant variables to determine the strength of association. Spearman’s correlations were used to test ordinal variables for association. Kruskal Wallis tests were conducted where categorical and ordinal variables were involved and used to determine if there were statistically significant differences between at least two groups of the independent variable (i.e., age category). A significance level of $p < 0.05$ was applied to all tests.

Results

The survey conducted was an attempt to explore whether there are differences across older age groups in Hong Kong, which include the emerging old (aged 50–64), young-old (aged 65–79), and old-old (aged 80 and above), in how they perceive the concept of intergeneration, their

acceptance of various forms of intergeneration, and their willingness to live in intergenerational housing. The discussion focuses on the perceptions and preferences of older adults living in subsidized housing in Hong Kong.

Sample description

A total of 796 questionnaires were collected, of which 677 were valid. Of the valid questionnaires, 437 were completed by older adults aged 50 and above, the target population of this study. The data collected from older adults were further segmented into three age categories, with 166 (37.99%) emerging old (aged 50–64), 177 (40.5%) young-old (aged 65–79), and 94 (21.51%) old-old (aged 80 and above). The median age range of the population studied was 65–69. Thirty-three percent of overall respondents reported “Personal income from work” to be their main income source. Only 1% of respondents in the old-old age category reported employment as an income source, compared to 78.3% of respondents in the emerging-old category and 17.0% of respondents in the young-old category. The percentage of emerging old respondents reporting higher income levels was substantially higher than the other two age categories (Table 1). The majority of the respondents resided in Rental Estates² (80.8%). The average household size reported by respondents in the emerging old age category (2.63) was slightly higher compared to young-old (2.28) and old-old (1.95) categories, suggesting that average household size decreases with age. More than half of the respondents overall (56.3%) as well as in each of the age categories reported having lived in their current housing for over 20 years (Tables 2–5).

Perceptions of intergeneration, acceptance of various levels of intergeneration, and willingness to live in intergenerational housing

When asked to define “intergeneration” based on a list of options, “Inclusive environment for people of all ages” was the most selected option across all age categories. However, the second most selected definition of intergeneration by the emerging old category was “Respect across generations” (40.5%), different from young-old category’s selection of “Mutual learning experiences” (40.5%) and the old-old category’s selection of “Interaction across different generations” (35.1%). The differences indicate there may be slight variations in the understanding of the concept of “intergeneration” across different age subgroups of older adults in Hong Kong.

A series of 5-point Likert scale questions assessing respondents’ acceptance of different levels of intergenerational with responses ranging from

Table 1. Sample description.

	Emerging old		Young old		Old old		Overall	
	(N = 166)	%	(N = 177)	%	(N = 94)	%	(N = 437)	%
Sex								
Female	104	62.7%	99	55.9%	55	58.5%	258	59.0%
Male	61	36.7%	78	44.1%	39	41.5%	178	40.7%
Missing	1	0.6%	0	0.0%	0	0.0%	1	0.2%
Marital status								
Single	49	29.5%	41	23.2%	17	18.1%	107	24.5%
Married	103	62.0%	121	68.4%	63	67.0%	287	65.7%
Others	14	8.4%	15	8.5%	14	14.9%	43	9.8%
Educational level								
Primary or below	20	12.0%	58	32.8%	51	54.3%	129	29.5%
Secondary	105	63.3%	94	53.1%	24	25.5%	223	51.0%
Post-secondary and tertiary	35	21.1%	23	13.0%	16	17.0%	74	16.9%
Post-graduate or above	5	3.0%	2	1.1%	0	0.0%	7	1.6%
Others	1	0.6%	0	0.0%	3	3.2%	4	0.9%
Residential type								
出租屋邨 Rental Estate ^a	151	91.0%	136	76.8%	66	70.2%	353	80.8%
資助出售房屋 Subsidized Sale Housing ^b	6	3.6%	8	4.5%	1	1.1%	15	3.4%
「長者安居樂」 Senior Citizen Residences Scheme ^c	2	1.2%	29	16.4%	25	26.6%	56	12.8%
Not sure	7	4.2%	4	2.3%	2	2.1%	13	3.0%
Duration of stay at current residence								
Less than a year	1	0.6%	8	4.5%	4	4.3%	13	3.0%
1–10 years	31	18.7%	44	24.9%	12	12.8%	87	19.9%
11–20 years	41	24.7%	20	11.3%	27	28.7%	88	20.1%
Over 20 years	91	54.8%	104	58.8%	51	54.3%	246	56.3%
Do not intend to answer	2	1.2%	1	0.6%	0	0.0%	3	0.7%
Monthly average income (HKD)								
<2000	5	3.0%	15	8.5%	9	9.6%	29	6.6%
2000–9,999	42	25.3%	86	48.6%	61	64.9%	189	43.2%
10,000–19,999	33	19.9%	11	6.2%	2	2.1%	46	10.5%
20,000–29,999	24	14.5%	7	4.0%	3	3.2%	34	7.8%
30,000–39,999	6	3.6%	2	1.1%	0	0.0%	8	1.8%
≥40,000	6	3.6%	2	1.1%	1	1.1%	9	2.1%
Do not intend to answer	50	30.1%	54	30.5%	18	19.1%	122	27.9%

^aRental Estate refers specifically to HKHS' subsidized rental scheme where rental rates are set at discounted market prices for lower-income families and individuals. Applicants are subject to eligibility requirements.

^bSubsidized Sale Housing refers to HKHS' Flat-for-Sale (FFS) scheme which provides housing units for sale at concessionary prices to tenants at HKHS' own rental estates and eligible applicants of the Government's Home Ownership Scheme (HOS). Applicants are subject to eligibility criteria and resale restrictions.

^cSenior Citizen Residence Scheme refers to developments under HKHS' Senior Citizen Residences (SEN) scheme targeting senior citizens aged 60 or above and which provides housing, community recreational facilities, and health care services for residents. While the SEN scheme has a peculiar payment system (long lease), it is in fact considered to be subsidized housing as the Government charges a nominal land premium for developments under this scheme and all applicants are subject to means test.

Table 2. Meaning of “intergeneration.”

	Emerging old		Young old		Old old		Overall	
	(N = 166)	%	(N = 177)	%	(N = 94)	%	(N = 437)	%
Inclusive environment for people of all ages	108	65.1%	94	53.1%	51	54.3%	253	57.9%
Interaction across different generations	67	40.4%	55	31.1%	33	35.1%	155	35.5%
Improvements on mental/physical health	28	16.9%	31	17.5%	14	14.9%	73	16.7%
Mutual learning experiences	62	37.3%	72	40.7%	26	27.7%	160	36.6%
Respect across generations	79	47.6%	71	40.1%	27	28.7%	177	40.5%
A process of compromising across ages	71	42.8%	68	38.4%	32	34.0%	171	39.1%
A trend	21	12.7%	28	15.8%	8	8.5%	57	13.0%
Development of empathy	42	25.3%	41	23.2%	17	18.1%	100	22.9%

Table 3. Incentives for living in intergenerational housing.

	Emerging old		Young old		Old old		Overall	
	(N = 166)	%	(N = 177)	%	(N = 94)	%	(N = 437)	%
Support from neighbors	77	46.40%	78	44.10%	53	56.40%	208	47.60%
Making new friends	50	30.10%	47	26.60%	25	26.60%	122	27.90%
Strong community	37	22.30%	48	27.10%	17	18.10%	102	23.30%
Reduction of rent	79	47.60%	73	41.20%	33	35.10%	185	42.30%
Diverse choices of community activities	27	16.30%	31	17.50%	13	13.80%	71	16.20%
Exchange of knowledge	45	27.10%	42	23.70%	22	23.40%	109	24.90%
Exchange of resources	19	11.40%	22	12.40%	13	13.80%	54	12.40%
Exchange of services	41	24.70%	39	22.00%	20	21.30%	100	22.90%
Financial returns on management	16	9.60%	11	6.20%	4	4.30%	31	7.10%
Diverse choices of facilities	32	19.30%	33	18.60%	9	9.60%	74	16.90%

Table 4. Perceived benefits of intergenerational housing.

	Emerging old		Young old		Old old		Overall	
	(N = 166)	%	(N = 177)	%	(N = 94)	%	(N = 437)	%
Provide support to yourself	60	36.10%	71	40.10%	45	47.90%	176	40.30%
Provide support/care for family members	70	42.20%	68	38.40%	32	34.00%	170	38.90%
Affordable rent	69	41.60%	66	37.30%	30	31.90%	165	37.80%
An opportunity to learn	22	13.30%	25	14.10%	12	12.80%	59	13.50%
Understanding perspectives of different generations	64	38.60%	60	33.90%	26	27.70%	150	34.30%
Increasing the sense of belonging to the community	31	18.70%	41	23.20%	21	22.30%	93	21.30%
Having more social activities	36	21.70%	39	22.00%	20	21.30%	95	21.70%
Being more active	20	12.00%	19	10.70%	9	9.60%	48	11.00%

Table 5. Anticipated problems of intergenerational housing.

	Emerging old		Young old		Old old		Overall	
	(N = 166)	%	(N = 177)	%	(N = 94)	%	(N = 437)	%
Daily routine being affected	99	59.60%	93	52.50%	46	48.90%	238	54.50%
Clash of personalities	98	59.00%	96	54.20%	60	63.80%	254	58.10%
Social conflict	81	48.80%	67	37.90%	36	38.30%	184	42.10%
Usage of facilities	94	56.60%	83	46.90%	38	40.40%	215	49.20%
Usage of common spaces	69	41.60%	67	37.90%	23	24.50%	159	36.40%
Privacy	115	69.30%	113	63.80%	39	41.50%	267	61.10%
Security	70	42.20%	61	34.50%	26	27.70%	157	35.90%
Hygiene	113	68.10%	110	62.10%	45	47.90%	268	61.30%

very unacceptable to very acceptable was also included in the questionnaire. While there was overwhelming opposition against living in the same unit with non-family members with 84.7% of all respondents giving an acceptance score of 2 or lower, the emerging old category was found to have generally higher acceptance levels compared to the other two older age categories. Taking inspiration from overseas examples of intergenerational housing where residents of different generations would share a living room and kitchen, the questionnaire included questions about the acceptability of “Common living room” and “Common kitchen.” Though the scores revealed an overall resistance to the concepts of sharing a living room and kitchen, respondents in the emerging old category seem to be slightly less resistant in comparison. Respondents in the emerging old category were also generally more open and accepting of taking on managing and organizing roles in the community in comparison to older age categories (Figure 1). This could be attributed to the more active lifestyles, the increase in educational and employment opportunities available, and the experiences that have shaped newer generations of older adults. Kruskal Wallis tests were run between each level of intergenerational living and age categories. This is used to determine whether there are statistically significant differences between age groups. Results of the Kruskal Wallis tests showed statistically significant age differences in the acceptance of the following levels of intergenerational living:

- Living in the same unit as family member(s) ($p = 0.03$)
- Living in the same unit with non-family member ($p = 0.006$)
- Common living room ($p = 0.02$)
- Common kitchen ($p = 0.03$)
- Voluntary self-management of the community ($p = 0.003$)
- Assist in organizing community workshops ($p = 0.0004$)
- Taking on a management role (with incentives) ($p = 0.0002$)

Given the higher acceptance of various levels of intergenerational living among emerging old respondents, it can be assumed the group may exhibit



Figure 1. Acceptance levels of various forms of intergenerational living (Likert plots).

similarly higher levels of willingness to live in intergenerational housing developments. However, in a subsequent question on willingness to live in intergenerational housing, where responses ranged from very unwilling to willing on a scale of 1–5, a smaller proportion of emerging old respondents gave a score of 4 or higher. Only 16.9% of emerging old respondents indicated willingness (score of 4 or above) to live in intergenerational housing, compared to 29.9 and 26.6% of respondents in the young-old and old-old

categories, respectively. Other factors influencing willingness to live in intergenerational housing were explored. A significant positive correlation was found between various aspects of community engagement (e.g., frequency of community facilities usage, self-rated level of community engagement, rating of experience engaging with other generations, and rating of relationship with community members/neighbors) and willingness to live in intergenerational housing. Similarly, results showed various aspects of housing satisfaction (e.g., layout of unit, provision of age-friendly features at the estate, location, accessibility, maintenance and management, safety and security, recreational amenities and activities) were significantly positively correlated with willingness to live in intergenerational housing. This indicates that as the level of community engagement or degree of housing satisfaction increases, willingness to live in intergenerational housing would tend to increase as well. While results indicated high significance, correlation coefficients were relatively weak, suggesting that other factors may also be at play in influencing willingness to live in intergenerational housing. Factors, such as marital status, housing tenure, duration of stay, living arrangement, household size, income, self-reported income sufficiency, domestic helper assistance, community facilities usage, and self-rated health were also explored but not found to be associated with willingness to live in intergenerational housing.

Respondents were asked to select incentives that would attract them to live in intergenerational housing as part of a multiple-response question. The top incentive was “Support from neighbors,” with 47.6% of overall older respondents selecting this option. Slight differences in the order of the top three incentives across age categories were observed. The top incentive selected by the emerging old category was “Reduction of rent” (47.6%), whereas “Support from neighbors” remains the most selected incentive amongst older respondents in the young-old (44.1%) and old-old (56.4%) age categories. Respondents were also asked about the perceived benefits and anticipated problems of living in intergenerational housing. The top two perceived benefits of intergenerational housing had to do with support. Examining the responses by age category revealed that older age groups were more likely to prioritize support for the self and see it as the most important benefit of living in intergenerational housing. Of the respondents in the old-old category, 47.9% selected the option “Provide support to yourself” when asked about the potential benefits brought about by living in intergenerational housing, compared to 36.1% of respondents in the emerging-old age category who had picked the same option. Conversely, 42.2% of emerging old respondents selected “Provide support/care for family members” whereas only 34% of old-old respondents selected the same option. Regarding anticipated problems of intergenerational housing, the

top concerns varied significantly between age categories. While respondents across all age categories anticipated hygiene problems (61.3%) and privacy problems (61.1%) would pose challenges at intergenerational housing developments, respondents in the old-old category had a different set of top two anticipated problems, with 64% of respondents selecting the option “Clash of personalities” and 54.5% selecting “Daily routine would be affected.”

Satisfaction with current housing and surroundings

When asked about the degree of satisfaction with various aspects of their current housing, respondents were in general moderately satisfied. A 5-point Likert scale was used, with responses ranging from extremely unsatisfied to extremely satisfied. Spearman’s correlation was applied, and the results revealed weak but significant associations between satisfaction levels and age categories. Comparison of the median scores across age categories reveals the old-old group tended to report slightly higher levels of satisfaction with certain aspects of the current unit, estate, and surroundings. Emerging old respondents were more likely to express lower levels of satisfaction (score of 2 or below) on various aspects of current housing and surroundings, suggesting that the newer generation of older adults are likely to have higher expectations regarding their living environment and will desire certain improvements to residential and neighborhood conditions.

Community engagement

Responses to questions on community engagement were provided on a 5-point Likert scale, with questions, such as self-rated level of community engagement (very low to very high) and rating relationships with neighbors (very unfamiliar to very close). The emerging old age category reported generally lower average scores in comparison to the young-old and old-old categories. Twenty-one percent of respondents in the young-old category reported a score of 4 and above for the level of community engagement on a scale of 1–5. In comparison, only 9.6 and 9.5% of respondents in the emerging old and old-old categories gave a score of 4 and above. When asked about relationships with community members and neighbors, only 26.5% of respondents from the emerging old category provided a score of 4 and above, compared to 40.6 and 31.9% of respondents from the young-old and old-old categories. The relatively lower levels of engagement reported by respondents in the emerging old category align with the assumption that most respondents in the young-old and old-old categories

are retired and may therefore spend more time and be more engaged in the community.

Discussion

Group differences in general demographics and level of community engagement

The survey conducted provided a means to gather insight into the perceptions and preferences on intergenerational housing of older residents living in subsidized housing in Hong Kong. Results from the survey revealed some differences between the emerging-old, young-old, and old-old age categories. The findings can contribute to understanding how the perceptions and preferences between older age groups may vary, helping to inform and facilitate the development of intergenerational solidarity in residential and neighborhood settings.

Based on the survey results, some degree of difference in demographics and level of community engagement between the three older age categories could be observed, notably in household size, employment, and level of community engagement. Results indicate household size declines with age, echoing the concerns relating to the decreasing availability of support to older age categories (Zimmer & Kwong, 2003). Decreasing co-residence of older people and family members implies more and more older adults are left to live either alone or only with their spouses (Chui, 2008). Studies have shown older adults living in larger household sizes tend to have higher levels of support, along with findings that suggest increased support availability can lead to improved health and well-being for older populations (Melchiorre et al., 2013; Shah, 2009). Regarding employment, it can be reasonably assumed most young-old and old-old respondents would have retired, given the retirement age of 65 in Hong Kong. One expectation is that people in the older age categories, freed from employment obligations, may have more free time to participate in community activities.

Community engagement can be seen as a key component in intergenerational practice, where older and younger populations are brought together to participate in the community through joint activities. These activities provide opportunities for intergenerational contact and the building of neighborly relationships, both of which are key to the development of intergenerational community support networks. Survey results showed that those in the emerging old and old-old age categories reported relatively lower levels of community engagement, with the young-old age category being the most active of all three age categories. It is conceivable that it would be more difficult for emerging old respondents to participate and engage in various community activities since most are employed in a full-

time capacity. Certain forms of community engagement, such as volunteerism, can allow older adults to take a more active role in the community, leveraging the time and skills of retirees. At the same time, it is conceivable that the old-old may face increasing barriers to community engagement as they age due to various mobility or health constraints. This calls for the development of a supportive living environment that considers the varying abilities and challenges amongst the older population, allowing older adults of different age categories and abilities to access a more diverse range of activities.

Group differences in perceptions, acceptance levels, and willingness to live in “intergenerational housing”

Results revealed some variation in perceptions and acceptance of “intergenerational housing” across the three age categories. Understanding what respondents across all three age categories associate the term “intergeneration” with can lend insight into the range of expectations regarding “intergenerational housing.” The main concerns respondents had about intergenerational housing across all three age categories were related to hygiene and privacy. This revealed some of the top priorities for housing from the perspective of older adults in Hong Kong. The emphasis placed on hygiene and privacy in housing can be attributed to the high-density, compact built environment in the Hong Kong context. Previous research found expectations relating to “privacy” and “cleanliness” tended to emerge within high-density residential environments (Arviv & Eizenberg, 2021) and that the arrangement of flat sharing between non-relatives in high-density settings was associated with increased stress and tension (Appold & Yuen, 2007). High-density residential environments could lead to competition for resources and services, interpersonal conflicts, unwanted interaction, crowdedness, and reduced privacy (Cao et al., 2019; Cheng, 2009; Tang & Yiu, 2010). Conversely, it has also been suggested that with proper management and organization, high-density residential environments provide the “critical mass” that would increase the likelihood of residents finding neighbors with whom they can connect with, and the proximity afforded by the density could encourage interactions and relationship-building between neighbors (Cheng, 2009; Tang & Yiu, 2010). A closer examination of responses across different age categories revealed “clashing personalities” and “disruptions to daily routines” as the top two concerns of old-old respondents. This suggests that old-old respondents were more likely to be concerned with intergenerational housing’s relational aspect and potential impact on existing lifestyle. It should also be noted that the list of concerns provided in the questionnaire was not necessarily specific

to intergenerational housing. The concerns regarding hygiene, privacy, clashing personalities, and disruptions to daily routines could very well exist at any conventional housing development. Nonetheless, it is still worth taking into consideration when planning and designing intergenerational housing for older populations.

While results on the willingness to live in intergenerational housing showed overwhelming opposition to sharing the same unit with non-family members was observed across all three age categories, the emerging old category tended to be slightly more accepting of various forms of intergenerational living in comparison to the other two categories, particularly in taking on managing and organizing roles in the community. Results also revealed that acceptance of a concept did not necessarily translate into willingness, as seen in the considerably lower percentage of emerging old expressing willingness to live in intergenerational housing compared to the other two age categories. At its core, intergenerational housing was less about the actual housing arrangement and more about the opportunities provided within a residential/neighborhood community for different generations to gather, mingle, and interact. Further study on willingness to engage in intergenerational practices within residential and neighborhood environments and on the existing spectrum of intergenerational housing models should be conducted to gain a better understanding of the older population's preferences.

Prioritization of social support across all three age categories

Across all three age categories, neighborly support and financial incentives were the main factors that would attract respondents to live in intergenerational housing. This prioritization of “support” is reinforced by the responses to the question regarding the benefits of intergenerational housing. All three age categories indicated support for self and family members as the top two anticipated benefits of intergenerational housing. While the need for social support in residential settings has been well-documented and discussed frequently in literature (Chui, 2008; Lee, 1985; Phillips et al., 2008; Siu & Phillips, 2002; Zhong et al., 2022), less is known about the residents' actual needs and priorities. The findings point to the older population's prioritization of social support in housing, confirming the emphasis on building support networks for older adults in residential and neighborhood settings observed in previous literature. Survey results show neighborly support is seen as both an incentive to live at an intergenerational housing development as well as an outcome of living at an intergenerational housing development. This reinforces the importance of intergenerational solidarity and calls for the channeling of resources toward cultivating

these neighborly support networks at intergenerational housing developments.

Limitations

This study has some limitations. First, the generalizability of the results to the general population is limited due to the study's focus on residents residing in Hong Kong Housing Society's subsidized housing estates. It can be assumed that older populations of lower socio-economic status would have different priorities, perceptions, and preferences with regard to housing, hence the results would not be generalizable across the entire older population of the city. Second, the study was unable to use stratified sampling based on age groups, which would have provided a better representation of different generations. Due to the COVID-19 pandemic social distancing measures, the mailbox distribution method was used, posing difficulties in controlling the age of the respondents.

Conclusion and future direction

To our knowledge, this study is the first comprehensive examination of perceptions and acceptance of intergenerational housing among older adults. Furthermore, the study recognized that preferences among older adults may vary and sought to identify whether there were group differences between the three age categories (emerging old, young-old, and old-old) under the umbrella term of "older adults," acknowledging the varying preferences, abilities, and needs within the older population. The study was an attempt to parse out the differences to better cater to new housing solutions to meet a range of needs of the older population. As such, this study has offered insight to inform further study and contributed to expanding the knowledge base of older adults' perceptions of intergenerational housing in the Asian context to facilitate the development and implementation of the concept in the future. While there are many examples of intergenerational housing and programs bringing about benefits to the community, the study has also highlighted some challenges in implementing intergenerational housing in Hong Kong. Results showed there is general resistance toward intergenerational housing across all three age categories, particularly when it involves sharing a flat, a kitchen, and a living room, with non-relative(s). However, intergenerational housing does not necessarily only refer to the co-living model of placing younger and older residents in the same unit as observed in some overseas examples. In the context of Hong Kong, given the high-density built environment and small apartment sizes, intergenerational housing would ideally be more on the scale of the

neighborhood, where the focus of intergenerational practice would be on the public/communal spaces and community engagement activities within them. The resistance toward intergenerational housing amongst survey respondents can be attributed to the particular form of intergenerational housing defined in the questionnaire. Nevertheless, there was consensus among respondents across all three age categories on the importance of neighborly support in intergenerational housing. Respondents' association of intergenerational housing with support (to self and family members) aligns with the study rationale of promoting intergenerational solidarity in residential and neighborhood settings. The findings suggest that there is potentially a growing interest in intergenerational housing/programs in the future.

There are some existing efforts to promote supportive residential and neighborhood settings at Hong Kong Housing Society (HKHS) estates. HKHS's Elderly Persons Flats, Elderly Lounge, Elderly Resources Center, Senior Citizen Residences (SEN) scheme, and Aging-in-Place (AIP) scheme are a few examples of such efforts (Hong Kong Housing Society, 2021a). In particular, the AIP scheme launched in 2012 aims to support senior tenants to age in place by providing services and encouraging participation in the neighborhood (Hong Kong Housing Society, 2020). However, most of the existing initiatives are monogenerational in nature, targeting and providing formal services to senior tenants at HKHS rental estates. Intergenerational solidarity would require engaging multiple generations and facilitating bottom-up and reciprocal initiatives. The AIP scheme's recent pivot to serve tenants of all age groups at their rental estates under the new Caring Engaging Smart (CES) scheme is a step in this direction. The new CES scheme aims to facilitate community participation and promote mutual support in estates and neighborhoods (Hong Kong Housing Society, 2021b). Further exploration is needed on the forms and types of support required by older adults, older adults' existing social networks and support systems, and older adults' willingness and ability to provide support. This would pave the way for identifying design principles, service models, and programming practices to encourage the provision and exchange of support between generations in residential and neighborhood settings.

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Notes

1. Hong Kong Housing Society (HKHS) is an independent, non-government, and not-for-profit organisation established in 1948. The second largest public housing provider in Hong Kong, HKHS has developed over 74,000 housing units under different schemes, most of which are subsidized (Hong Kong Housing Society, 2023). As a self-described “housing laboratory,” HKHS is committed to developing different innovative housing solutions to serve the needs of Hong Kong.
2. Rental Estate refers specifically to HKHS’ subsidized rental scheme where rental rates are set at discounted market prices for lower-income families and individuals. Applicants are subject to eligibility requirements. (comparable to Public Rental Housing).

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