Grandparenting is an important dimension of family caregiving over one’s life course, playing a vital role in the intergenerational relationship and family well-being (Xu & Chi, 2015). Grandparenting can provide emotional support, and love, and includes provision of instrumental support, such as in meal preparation, the transmission of cultural/social value, and often involves primary childcare when the parent is absent. In Asia, grandparents’ contribution to childcare, and most likely housework, carries more weight than any other region due to the greater prevalence of three-generation households, building on traditional values of family care and its concomitant economic value. However, how many older people in Asia provide care for grandchildren, what their demographics and socioeconomic characteristics are, and what their caregiving looks like remain relatively unknown. This paper estimates the prevalence of co-resident grandparenting and describes the grandparent characteristics in Asia using the two international surveys. Then it reviews the literature primarily from East-Asian and South-East Asian countries, on the effects of grandparenting on health and well-being, and intergenerational solidarity. Based on the quantitative and qualitative evidence, relevant implications for policy and parenting education will be discussed.

Prevalence of intergenerational households in Asia

An extended family is the common type of household in Asia-Pacific that nearly half of Asians live with multiple relatives (Pew Research Center, 2020). Despite a gradual decline over the decades, extended or intergenerational families are still more prevalent in Asia than any other region globally. Among the various types of intergenerational households, one with three or more generation living together (three-generation) and one where grandparents live with grandchildren without the parents to those children (skip-generation) include co-resident grandparents who are highly likely to provide informal care and help (Knodel & Nguyen, 2015). Traditionally, the widespread intergenerational support has been explained by Asian culture that values commitment to protecting one’s family (Xu & Chi, 2015). Added to it, more recently, economic development, parents’ employment (e.g. labor migration in China, Myanmar, Vietnam, and Thailand or mothers’ employment in South Korea), combined with a lack of public childcare supports and old-age pensions, have motivated the grandparental involvement in childcare (Craig, Hamilton, & Brown, 2019; Ingersoll-Dayton, Tangchonlatip, Punpuing, & Yakas, 2018; Knodel & Teerawichitchainan, 2019; P.-C. Ko & Hank, 2014).

The latest UN household data shows that in nearly one in four households grandparents live with their grandchildren in Asia, with large variations across countries and regions (UN DESA, 2019). In Figure 1, three-generation households account for 21.2 percent of the total households in Asia, on average, ranging widely from 3.0 percent in Iran to 44.6 percent in Tajikistan. Skip-generation households account for 1.3 percent, on average, which is lowest 0.1 percent in Afghanistan and largest 4.5 percent in Kyrgyzstan. Figure 2 by region shows that three-generation households are most common in Central Asia (27.7 percent) as much as in Southern Asia (27.0 percent), indicating that approximately one in five households fall into this category. Eastern Asia shows the lowest share of three-generation households as about 15.1 percent. Skip-generation households are most prevalent in South-Eastern Asia (2.4 percent) and least prevalent in Western Asia (0.4 percent).
The previous analyses point out that the share of intergenerational households is negatively correlated with the country GDP such that the larger a country’s GDP is, the less likely an older adult to live with their children (Knodel & Nguyen, 2015; Knodel & Teerawichitchainan, 2019; Pew Research Center, 2020). Consistently, the overall pattern in the UN data suggests that the proportion of these intergenerational households is negatively related to the economic situation of a country that both household types get less common in countries with higher standard of living (Figure 3).

**Estimated prevalence of co-resident grandparents**

Estimating precisely how large grandparenthood is – the ratio of those involved in grandparenting to those not – is a challenging task. It is in part because there is no consensus over the operational definition of grandparenting (Sadruddin et al., 2019), but primarily because there is an absence of data collecting detailed information on grandparents. As a result, previous studies devise their estimation strategies for the prevalence of grandparenting based on data availability. Knodel and Nguyen (2015) used the total population aged 60 or over and calculated that those who have ever cared for their grandchildren account for 47.1 percent, 32.5 percent, and 28.1 percent in 2012 Myanmar, 2011 Vietnam, and 2011 Thailand, respectively. Ko and Hank (2014) used grandparents aged 45 or over and concluded that 58 percent offered caregiving in 2008 China while only 6 percent did so in South Korea the same year. Across the studies, older adults at age 60 or over have been the most popular sample to estimate the scale of grandparenting probably because the currently available aging surveys collect data about caregiving on the relationship basis as well as the household basis (Baker & Silverstein, 2012; Knodel & Nguyen, 2015; Knodel & Teerawichitchainan, 2019; L. S. F. Ko, 2012).

However, becoming a grandparent is more about marital status and the childbirth of an adult child than getting old. The number of grandparents under age 60 might be nonnegligible, and could be larger in developing countries with a tendency towards higher fertility rates and lower life expectancies. At the same time, grandparents aged 85 or over might not be as healthy as to provide grandparenting. While the risk of frailty gradually increases with age, it stands out at age 85: more than one in four (25.7 percent) older adults at age 85-89 display the symptoms of frailty, compared to 3.2 percent for those aged 60-64 (Fried et al., 2001). Therefore, without an abundance of data on individual grandparents, an alternative way to estimate the likelihood of grandparenting could probably be looking at adults under age 85, focusing on co-resident grandparents.²

The harmonized microdata from the IPUMS International suggests that approximately 24.3 percent of adults aged 45-84 live with grandchildren of all ages in the 21 developing countries in Asia, which could be translated to co-resident grandparenting.⁴ Iran shows the lowest estimate (4.6 percent), while Lao People’s Democratic Republic shows the largest (37.1 percent). As with the household-level results, the trend of grandparents’ co-residence with grandchildren decreasing as the country’s GDP increasing persists across the countries (Figure 4). Israel was the main driver of the variations across the countries included when it comes to the national income. However, the pattern was similar when Israel was excluded, although it became no longer statistically significant. Likewise, by region, the intergenerational households with grandparents aged 45-84 were the most common in Central Asia (34.2 percent), where the average GDP is the lowest, but the least in Western Asia (19.8 percent) where the average GDP is the highest.
The estimated co-resident grandparenting is larger in rural areas than urban areas in my data. Grandparents living with their grandchildren account for 26.0 percent of those aged 45-84 in rural areas and 22.1 percent in urban areas, on average. Israel was a notable exception that the estimated co-resident grandparenting is significantly higher in urban areas (4.7 percent) than rural areas (2.4 percent). These results are consistent with the previous literature that grandparents in rural areas are likely provide care for grandchildren at a higher rate than their counterparts in urban areas (Xu & Chi, 2015; Zhang, 2010).

Profile of co-resident grandparents

Who provides care for grandchildren in the household? Not limited to Asia, the relatively young and healthy are more likely to be grandparenting than the relatively old and in poor health. In China, Hong Kong, Singapore, South Korea, and Taiwan, grandparents who provide care for their grandchildren are more likely to be younger, women, more educated, unemployed or retired, healthier than their counterparts who do not provide such care (Xu & Chi, 2015). Patrilineal grandparents are more likely than matrilineal grandparents to be significantly engaged in care in the culture of son preference, such as in China (P.-C. Ko & Hank, 2014; Xu & Chi, 2018; Xu, Silverstein, & Chi, 2014). However, the profile of grandparents in other Asian countries, mostly of lower income than those 5 countries, are not widely known.

From the IPUMS International, women were more likely than men to live with grandchildren in the household between ages 45-84 (61.7 percent vs. 38.3 percent) as shown in Table 1. On average, 56.5 percent of these co-resident grandparents aged 45-84 lived in rural areas. 29.4 percent were parents from the mother’s side, showing that paternal grandparents are more likely to live with their grandparents. The average age of the grandparents was 62.6 years old. Although one in three (33.1 percent) were between the ages of 55 and 64, those aged 45-54 still account for nearly a quarter. Grandfathers appear to be a little older than grandmothers. A majority of the grandparents had less than primary education, showing that more grandfathers had completed primary or more education than grandmothers. By marital status, 67.3 percent of the grandparents were married or in relationship with a larger share for grandfathers. By employment, 35.7 percent of the grandparents were employed, given the relatively low age threshold of 45. Those who were employed were on average 51.9 years old and most likely to be self-employed. The share of grandfathers working for pay was twice as much as that of grandmothers. Although it is tiny for both sexes, the likelihood of working without pay was larger for grandmothers than grandfathers (9.8 percent vs 2.0 percent).

Conditioning on the co-residence status, the characteristics of those aged 45-84 do not significantly differ by country’s GDP. However, the differentials associated with country income, likewise regional income were negligible with and without Israel. Apart from the income gradient, co-resident grandparents in Central Asia were the oldest (at age 64.3) while their counterparts in Eastern Asia were the youngest (at age 61.8). The education level of the grandparents was the highest in Western Asia and lowest in Southern Asia. The employment rate was the highest in South-Eastern Asia where almost half (46.4 percent) of co-resident grandparents were working. In contrast, grandparents in Central Asia were the least likely to be in work.

Types and amount of caregiving provided

The role of grandparent in Asia is shaped by social, cultural, and pragmatic expectations, which could stretch from an ancillary helper to an instrumental support. Indeed, grandparenting is viewed as a
routine part childcare assistance and cultural transmission across the three generations in Japan, Hong Kong, Singapore, and Thailand (Lou & Chi, 2012). In Singapore and Japan, grandparents are reported to be undertaking multiple activities, including childcare, housework, cultural transfer, and mediation between parents and grandparents (Thang, Mehta, Usui, & Tsuruwaka, 2011). All in all, caregiving to grandchildren includes a wide range of activities from physical care, such as preparing meals and doing school pick-ups, to non-material care, such as passing along tradition and cultural values, supervising grandchildren’s school homework, and improving their social skills.

The amount/intensity of care are commonly measured by the activity type and time spent caregiving (Craig et al., 2019). Given the data limitation, the age of youngest grandchild could proxy the amount of care needed as the types of caregiving activities change according to the developmental stage of a grandchild. If a grandparent lives with a newborn grandchild, the need for babysitting and care for the mother is the greatest, which may require full-time commitment to caregiving. If a youngest grandchild is an adolescent or older, the need to provide physical care might be minimal as much as easily fulfilled without undertaking demanding activities.

In the IPUMS International, the average age of the youngest grandchild, who live with a grandparent aged 45-84, was 4.9 years old, in early childhood. Figure 5 shows that almost all of them were under age 15, of which nearly 50 percent were infants at age 0-2. The youngest grandchild in the household was the oldest in Israel (8.7 years old) and the youngest in Iraq (1.34 years old). By region the age of the youngest co-resident grandchild was highest in Eastern Asia and lowest in Central Asia (5.9 years old vs. 3.7 years old).

Grandparents as a primary caregiver: skip-generation household

Internal labor migration and family crises are often considered to be the reasons for skip-generation households particularly in developing economies in Asia (Ingersoll-Dayton et al., 2018; Knodel & Teerawichitchainan, 2019). Grandparents aged 45-84 in skip-generation households are estimated to account for 6.3 percent of the total co-resident grandparents aged 45-84, based on the IPUMS International. In Table 2, the likelihood of living in rural areas grandmothers were more likely to live in a skip-generation household than grandfathers (67.1 percent vs 37.9 percent). Those grandparents were 64.9 years old, on average. 58.9 percent had less than primary education and 66.7 percent were married or in relationship. The employed amount to 37.0 percent of the grandparents in skip-generation households, working mostly as self-employed. By sex, grandfathers were more likely than grandmothers to be older, more educated, married, and employed. Compared to the grandparents in three-generation households, those in skip-generation households were older by about 2.4 years. But other than that, most of the demographic characteristics of grandparents look similar between the two types of household. It is assumed that the amount of care provided by grandparents could be larger in a skip-generation family than a three-generation family, although it is not verifiable in my data.

Effects of grandparenting on health and well-being of grandparents and grandchildren

Providing childcare and housework assistance for adult children and grandchildren has both positive and negative effects on health and well-being for Asian grandparents. Based mainly on the studies for Chinese older adults, providing such care is likely to reduce depressive symptoms, improve self-rated health, mobility, and life satisfaction (as reviewed by Xu & Chi, 2015). These health benefits of grandparenting are the unique findings limited to Asia compared to Europe or North America, where
predominantly negative effects are reported (Arber & Timonen, 2012). Grandparents in Asia could find caregiving satisfactory and meaningful under the cultural norm that anticipates grandparental involvement in strengthening familial bonds and family heritage (Knodel & Nguyen, 2015; P.-C. Ko & Hank, 2014). Also, financial remittance from the parents and emotional closeness based on increased interaction between a grandparent and the grandchild could lead to better physical health and well-being (Cong & Silverstein, 2012; Knodel & Nguyen, 2015). Having said that, Asian grandparents have reported that exhaustion, physical and psychological stress, and decreased social well-being are associated with grandparenting like their Western peers (Xu & Chi, 2015).

From the child’s perspective, the effects of receiving care from grandparents on the grandchild’s health and well-being are ambiguous. An extensive review of the literature published 2000-2019 distinguished the grandparent effects between skip-generation families and multigeneration families and found a considerable variation in the research findings so far (Sadruddin et al., 2019). Studies on skip-generation families mostly from China, together with South Korea, Taiwan, and Thailand, show a negative association between grandparenting and various psychological outcomes and nutrition, overall. Studies on multigenerational families in various Asian countries suggest that grandparental care is associated with both positive outcomes (i.e. increased infant feeding, physical and cognitive development, health behaviors, and social skills) and negative outcomes (i.e. obesity and delayed non-verbal intelligence). Likewise, recent studies not included in this review present mixed results: grandparenting is related to good mental health, greater resilience, and prosocial behavior in youth (Buchanan & Rotkirch, 2018; Gardiner, 2020) but to behavioral problems for school-age children (Y. Li, Cui, Kok, Deatrick, & Liu, 2019). The presence of grandparents in the household could, on the one hand, function as a major support system for the grandchildren at times of family crises or absence (Gardiner, 2020). On the other hand, it could cause stress to the child because of a generational gap, authoritative parenting style, and stigma to being raised by grandparents (Wang, Hayslip, Sun, & Zhu, 2019).

**Effective grandparenting for intergenerational solidarity**

The family dynamics around grandparental involvement in family care in the household could affect the relationship between the generations in both ways. The duration of grandparenting and frequent contact with the grandchild post-caregiving period are associated with strong intergenerational solidarity in Korean and Taiwanese multigenerational families, respectively (Lee & Bauer, 2010; Lin & Harwood, 2003). The intergenerational conflict associated with grandparenting is most likely to happen between parents and grandparents. This is due to the differences in view on discipline method and physical punishment, the tension between daughter-in-law and mother-in-law, or uncertain role when co-parenting (Mehta, 2012; Xu & Chi, 2015). Similarly, a qualitative study on Thai skip-generation families finds that between the grandparents and the grandchildren, solidarity is determined by emotional closeness, instrumental help, and financial assistance. The conflict is influenced by the grandchildren’s confusion in the roles of grandparents, grandchildren’s misbehavior, and economic tensions (Ingersoll-Dayton et al., 2018).

Grandparent-parent solidarity matters to grandchildren’s social development as well as the parents’ parenting competence. Harmonious joint-parenting between parents and grandparents -- defined in terms of the co-parenting agreement, closeness, support, and undermining exposure of the child to conflict, endorsement of grandparents’ parenting, and division of labor -- was associated with the mother’s parenting self-efficacy and the grandchildren’s social competence (X. Li & Liu, 2019). Also,
emotional closeness between parents and grandparents is strongly associated with grandparent-grandchild relationship (Xu et al., 2014).

A sense of solidarity between grandparents and grandchildren through emotional closeness is likely to buffer the negative impacts of certain parenting styles. Among three-generation families in Pakistan, authoritative parenting, as reported by the child aged 13-18, was associated to poorer social development (i.e. overconfidence and inappropriate assertiveness). However, when children were emotionally close to their grandparents, this mitigated the adverse effects of authoritative parenting by both mothers and fathers (Akhtar, Malik, & Begeer, 2017).

All in all, in order to foster greater intergenerational solidarity, parents and grandparents need to, and be advised, to work together to enhance their emotional bonds but to reduce the potential tensions that might arise during the grandparental assistance with family care. Asian grandparents, particularly grandfathers, are known to be authoritative relative to their peers in Western countries (Buchanan & Rotkirch, 2018). Although a recent study finds that over-protection and care by grandparents are positively related to grandchild’s emotional and behavioral problems (Y. Li et al., 2019), research evidence on how different parenting styles of grandparents influence family outcomes in Asia is scant and thus, should be addressed in future studies. As well as promoting intergenerational solidarity in the family environment, effective grandparenting may also influence intergenerational solidarity at the community and society levels, through changing attitudes towards aging (as noted by Xu & Chi, 2015) and providing the social and emotional skills for effective communication between the generations.

Conclusion and recommendations

Understanding the lifecourse-related needs of children and parents, and the capacities and attributes of the resident grandparents (including their likelihood to work, frailty and so on) are essential details for determining any policy or programming role in the support of grandparental care.

About a quarter of the households in Asia are multigenerational families with grandparents and grandchildren living together, influenced by the tradition and the recent practicality. The co-resident grandparents aged 45-84, who are assumed to be capable of providing care for the family, are likely to be female, living in rural areas, from the father’s side, in old age, less educated, married, and unemployed. Their grandchildren are predominantly between the ages of 0 and 2, suggesting that many co-resident grandparents could be assisting with extensive care and housework. Skip-generation families are more common in developing countries than developed countries, but the co-resident grandparents do not differ much from those in three-generation families in terms of their demographic characteristics, except for older age. Although many Asian grandparents consider caregiving for younger generations more fulfilling than stressful, the results of providing and receiving grandparenting could be both positive and negative. By building strong emotional bonds between generations during the caregiving spell, grandparenting could contribute to strong family relationships and healthy child development.

The evidence raised on the prevalence on grandparents’ co-residency, their sociodemographic characteristics, and the effects of grandparenting provides some useful starting points for parenting education:

- The level of economic development could affect the needs for co-resident grandparenting, with a larger need in rural areas in low-income countries. It may reflect the fact that public childcare
services and supports are insufficient to cover the childcare needs, accentuating the need for informal family care. It may also reflect the financial needs from the grandparents’ side due to the inadequacy of pensions.

- Moreover, public policies for supporting intergeneration families are very rare even in high-income countries other than the tax credit in Singapore and elderly dependent tax deduction in Japan (OECD, 2020; Xu & Chi, 2015).
- Given the absence of public policies for grandparenting, parenting education for grandparents who provide care could effectively address the challenges they face during the caregiving spell. For example, the programs could aim at building emotional closeness, managing stress and conflict among the generations, adjusting co-parenting for those grandparents, or promoting healthy lifestyle. For skip-generation families, parenting skills training could be added.
- When the parenting education programs are designed, the characteristics of grandparents (i.e. age, education level, employment) and caregiving (i.e. age of the grandchild, primary activities, frequency, and time) should be taken into account. For instance, materials should be easy to read and understand for grandparents and tailored to the care needs appropriate to the grandchild’s developmental stage. Any in-person courses need to account for the mobility and age-related conditions of the attendees.
- Grandparents in skip-generation families in rural areas might have greater needs for grandparenting support than three-generation families in urban areas as more significant childcare commitment will be required as a primary caregiver. Therefore, the anticipated program should also consider the rural-urban gap in resources and infrastructure, and family composition.

A caveat of this study is that the estimated prevalence of grandparenting using the household surveys from the UN and the IPUMS is limited to the selected countries where the data is available, with a varying degree of the reference year. The figures are likely to understate the actual extent of grandparenting on average, if support from non-resident grandparents is generally higher, and overstate the magnitude if the co-resident grandparents provide less support – perhaps due to their own health problems. Therefore, the estimates are suggestive and need cautious interpretation. More precise evaluations and tangible policy recommendations could be possible if data on comprehensive information on grandparents’ socioeconomic status, grandparenting status, caregiving practices, and outcomes become available in the future.
References


Table 1 The characteristics of co-resident grandparents aged 45-84: By sex

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Grandmother</th>
<th>Grandfather</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>0.565</td>
<td>0.560</td>
<td>0.570</td>
</tr>
<tr>
<td>Maternal</td>
<td>0.294</td>
<td>0.284</td>
<td>0.311</td>
</tr>
<tr>
<td>Age</td>
<td>62.62</td>
<td>62.41</td>
<td>62.92</td>
</tr>
<tr>
<td>45-54</td>
<td>0.243</td>
<td>0.256</td>
<td>0.223</td>
</tr>
<tr>
<td>55-64</td>
<td>0.331</td>
<td>0.323</td>
<td>0.343</td>
</tr>
<tr>
<td>65-74</td>
<td>0.279</td>
<td>0.273</td>
<td>0.286</td>
</tr>
<tr>
<td>75-84</td>
<td>0.147</td>
<td>0.147</td>
<td>0.148</td>
</tr>
<tr>
<td>Less than primary</td>
<td>0.632</td>
<td>0.679</td>
<td>0.504</td>
</tr>
<tr>
<td>Primary</td>
<td>0.243</td>
<td>0.171</td>
<td>0.287</td>
</tr>
<tr>
<td>Secondary</td>
<td>0.104</td>
<td>0.111</td>
<td>0.147</td>
</tr>
<tr>
<td>University</td>
<td>0.068</td>
<td>0.032</td>
<td>0.057</td>
</tr>
<tr>
<td>Married/in union</td>
<td>0.673</td>
<td>0.557</td>
<td>0.868</td>
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<tr>
<td>Employed</td>
<td>0.357</td>
<td>0.246</td>
<td>0.539</td>
</tr>
<tr>
<td>Self-employed</td>
<td>0.312</td>
<td>0.136</td>
<td>0.363</td>
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<tr>
<td>Wage/salary worker</td>
<td>0.093</td>
<td>0.052</td>
<td>0.154</td>
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<tr>
<td>Unpaid worker</td>
<td>0.073</td>
<td>0.098</td>
<td>0.020</td>
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<tr>
<td>Total</td>
<td>1.000</td>
<td>0.617</td>
<td>0.383</td>
</tr>
</tbody>
</table>

Notes: Data from the IPUMS International. These are the means of the country-level population estimates. Missing values are not included. IPUMS International person weight is applied.

Table 2 The characteristics of co-resident grandparents aged 45-84: By household type and sex

<table>
<thead>
<tr>
<th></th>
<th>Skip-generation households</th>
<th>Three-generation households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Grandmother</td>
</tr>
<tr>
<td>Rural</td>
<td>0.509</td>
<td>0.504</td>
</tr>
<tr>
<td>Age</td>
<td>64.89</td>
<td>64.13</td>
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<tr>
<td>45-54</td>
<td>0.139</td>
<td>0.157</td>
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<tr>
<td>55-64</td>
<td>0.338</td>
<td>0.357</td>
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<tr>
<td>65-74</td>
<td>0.358</td>
<td>0.342</td>
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<tr>
<td>75-84</td>
<td>0.165</td>
<td>0.144</td>
</tr>
<tr>
<td>Less than primary</td>
<td>0.589</td>
<td>0.652</td>
</tr>
<tr>
<td>Primary</td>
<td>0.228</td>
<td>0.189</td>
</tr>
<tr>
<td>Secondary</td>
<td>0.130</td>
<td>0.117</td>
</tr>
<tr>
<td>University</td>
<td>0.051</td>
<td>0.038</td>
</tr>
<tr>
<td>Married/in union</td>
<td>0.667</td>
<td>0.594</td>
</tr>
<tr>
<td>Employed</td>
<td>0.370</td>
<td>0.294</td>
</tr>
<tr>
<td>Self-employed</td>
<td>0.245</td>
<td>0.179</td>
</tr>
<tr>
<td>Wage/salary worker</td>
<td>0.093</td>
<td>0.074</td>
</tr>
<tr>
<td>Unpaid worker</td>
<td>0.068</td>
<td>0.106</td>
</tr>
<tr>
<td>Total</td>
<td>1.000</td>
<td>0.671</td>
</tr>
</tbody>
</table>

Notes: Data from the IPUMS International. Missing values are not included. IPUMS International person weight is applied.
Notes: Latest data from 31 countries available in the UN Database on Household Size and Composition 2019 and the Population Census of Republic of Korea and Japan in 2015. Percentage of three-generation and skip-generation households of the total households in each country aggregated by region.

**Figure 1** Intergenerational households with grandparents across Asia
Notes: Household types refer to the latest non-missing data from 31 countries available in the UN Database on Household Size and Composition 2019 and the Population Census of Republic of Korea and Japan in 2015. Percentage of three-generation and skip-generation households of the total households in each country aggregated by region.

Figure 2 Three-generation and skip-generation households by region
Notes: Household types refer to the latest non-missing data from 31 countries available in the UN Database on Household Size and Composition 2019. GDP per capita, PPP references year 2017 from the World Bank World Development Indicators. Percentage of three-generation and skip-generation households of the total households in each country aggregated by region.

**Figure 3 Proportion of Intergenerational Households by GDP per Capita, PPP**
Notes: Latest data from 21 countries available in the IPUMS International. IPUMS International person weight is applied. GDP per capita, PPP references year 2017 from the World Bank World Development Indicators.

Figure 4 Proportion of co-resident grandparenting estimates by GDP per capita, PPP
Notes: Latest data from 21 countries available in the IPUMS International. IPUMS International person weight is applied.

**Figure 5 Age of the youngest grandchild in the household**


2. Country groupings in Asia are defined according to the M49 Standard (UN Statistics Division, n.d.).

3. I set the lower limit to 45 consistent to P.-C. Ko and Hank (2014) and Zhang (2010) who estimated the prevalence of grandparenting based on grandparents age 45 or older.

Vietnam. Grandparents are identified based on the location of a grandchild in the household. Consequently, grandparents who live separately from the household where the grandchild belongs are not identifiable (Minnesota Population Center, 2019).

5 The developmental stage of children is categorized into infancy (ages 0-2), early childhood (ages 3-5), school age and early adolescence (ages 6-14), and adolescence and beyond (ages 15 or over) (UNICEF, n.d.).