

住宅轉銜與生活品質：中老年智障者及其老年父母

(期末報告)

(Housing transitions and quality of life: Aging adults with intellectual disability and their parents)

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本計畫除繳交成果報告外，另含下列出國報告，共 1_ 份：

出席國際學術會議心得報告

出國參訪及考察心得報告

處理方式：除列管計畫及下列情形者外，得立即公開查詢

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中 華 民 國 107 年 7 月 31 日

住宅轉銜與生活品質：中老年智障者及其老年父母 (期末報告) 中文摘要

關鍵字：住宅轉銜、老年遷移、雙老家庭、老人、智障、社會照護、健康照護、不平等、生活品質

研究背景與目的：本兩年期¹ 研究目的在探討中老年智障者及其同住老年父母（簡稱雙老家庭）照護需求、服務使用、老年遷移決策過程、住宅轉銜模式、遷移經驗與生活品質，並與台灣一般老人比較。

研究方法：第一階段以質性方法深度訪談及 Clapham (2005, 2010) “housing pathways” 模式探討新竹市 30 位中老年智障者(≥40 歲²)及其同住老年父母（30 個雙老家庭）健康失能、照護需求、服務使用、社會因素、住家主觀看法、遷移、住宅轉銜和生活福祉的關係。第二階段依質性研究發現，發展標準化問卷，普查新竹市 161 個及花蓮縣 76 個雙老家庭，檢視同住「雙老家庭」健康、社會因素和住宅轉銜模式和生活品質關係；以及深度訪談花蓮 30 個雙老家庭。第三階段，以質性研究法及“housing pathways”模式探討 30 名一般中老年人(≥55 歲)住宅轉銜因素和福祉，和前述中老年智障者及其老年父母質性研究結果比較。

研究結果：

(1)30 名新竹雙老家庭質性訪談發現

發現「雙老」家庭也可能是兩代「三老」家庭，老年衰弱父母及中老年智障者，由中老年手足照顧；多數中老年智障者及其老年父母未使用社會服務。智障者照顧轉銜和父母老年遷移綁在一起，前者途徑形式為「有規劃」和「未規劃」；後者為「不想搬」與「有搬遷」計畫；兩者途徑形式受家庭經濟與家庭互動關係，及父母個人自主性、對傳統照顧文化與房舍認同所影響；已經或可能接手照顧雙老的中老年手足的經濟狀況與照顧文化認同，必須納入考量。父母與手足個人傳統照顧文化認同、經濟及家庭互動關係，大過於失能程度與正式支持系統的影響。（已經發表：周月清、李婉萍、王文娟。(2018)。兩代「三老」家庭照顧轉銜與老年遷移：老年父母、中老年智障者與手足。臺大社工學刊，37, 99-149。）

(2) 60 名新竹及花蓮質性訪談及 237 兩縣市之調查訪問（詳見 2018 年發表在英國老

¹ 原申請三年，通過兩年，原計劃書第三年無法執行。

² 原計劃為 45 歲以上者，但樣本數太少，因此申請變更擴大為 40 歲及以上之智障者。

人學會國際研討會 Manchester，如附件)。

質性研究發現多數選擇在地老化而非老年搬遷。調查的量化資料有 61.6% 的老年父母選擇與智障子女在地老化，另外的 38.4%：沒有智障子女自己在地老化、搬去與其他非障礙子女同住和安養院。邏輯是回歸分析發現，針對選擇與智障子女在地老化的顯著相關因素包括：居住房舍是自己的、滿意目前的居住社區，但獲得較低程度的社會支持。

(3) 30 名一般中老年人質性訪談發現

一般老人訪談來源：(1) 經過朋友介紹自己的家人、親友、教會及服務單位的長者；(2) 弘道老人基金會介紹。受訪地區：台北、台中、南投、高雄、屏東、宜蘭、花蓮。居住型態：獨居、與外籍看護同住、與配偶同住、與子女同住（三代同堂）、住安養院。獨居者多數不想搬去安養院，有子女者子女偶會返家探視；弘道基金會介紹之失能者有使用基金會居服；健康者若為弘道基金會介紹則會參加社區理事會辦的活動。和中老年智障者及有智障子女老人相同處，都不想搬去機構，對機構服務品質沒信心及認為住機構就是遭家人拋棄；不同處有智障子女的老人不會獨居，至少與智障子女同住，智障子女也可能成為其身體失能後的照顧者；但針對未來失能搬遷或居住安排計畫，有智障子女者則須考量智障子女的照顧轉銜，一般老人則只須考量自己的計畫即可。

結論：

- (1) 兩代「雙老」或「三老」家庭就地老化健康與社會照顧需求，亟待納入長照服務。
- (2) 為支持中高齡智障者及其高齡父母就地老化，住房舍及相關支持服務，當納入住宅與長照政策永續規劃。
- (3) 無論失能與否及是否有障礙子女之老人，多數選擇就地老化；拓展普及性與可負擔的長照服務有其必要性，而社區理事會的長青服務，亦應納入這群中高齡智障者及其高齡父母。

英文摘要

Housing transitions and quality of life: Aging adults with intellectual disability and their parents

Abstract

Key words: moving in old age, housing transitions, older people, intellectual disability, quality of life, inequality, long-term care

Background: Little research has been conducted about care needs and housing transitions among **old two-generation families** that include **aging (≥ 40) adults with intellectual disabilities (ID) and their older parents**. A mixed methods approach and the “housing pathways” theory were employed to explore how moving in old age and care needs among these older individuals/families including the experiences comparison with general older people in Taiwan.

Methods: **First stage**, 30 old two-generation families in Hsinchu City, 30 aging adults with ID and their older parents, were invited to participate in our in-depth interview to explore care and moving in old age among these families. Theoretical framework of “housing pathways” was employed as the starting point of the analysis. **Based on the findings of the qualitative study**, standardized questionnaires was developed to collect quantitative data and to investigate the relationships among the dimensions of housing pathways, and the choices of moving in old age among these older individuals/families. **Second stage**, 161 older two-generation families from Hsinchu City and 76 from Hualien County were invited and completed a face-to-face interview survey at their homes. Furthermore, another 30 two-generation families from Hualien County were invited and participated in the in-depth interview. **Third stage**, in order to compare the aging adults with ID and their older parents with old people from the general population, 30 older people (**aged ≥ 55 and ≥ 65**) without a child with ID in Taiwan taken part in the in-depth interview.

Findings

- (1) The findings showed that an older two-generation family might include not only older parents and ageing offspring with ID, but also the ageing siblings of the ageing adults with ID. These ageing siblings were likely to be the carers of older and frail parents and ageing adults with ID. Families including older parents and ageing adults with ID rarely used services which are provided for people with disability and older people from formal systems. The parents’ care transition plan for ageing adults with ID and

their own moving plan in old age were intersected, connecting parents' and siblings' individual, family and social contexts. Two types of pathways to both areas, namely care transition of ageing offspring with ID and older parents' moving, were identified: “planned” vs. “not planned” and “not considering moving” vs. “considering moving”. The types of pathways of moving in old age and care transition among these families are related to individual parents’ autonomy and parents home identity and both parents' and siblings’ cultural identity as well as with the relationship and financial conditions of both the original and siblings’ families.

- (2) Qualitative findings present that ageing in the old place was more popular than moving. Survey study showed that 61.6% of the parents who were interviewed would choose ageing in place with their ageing offspring with ID and another 38.4% participants would stay in the old place without their disabled children or move to the other children’s home/nursing home. Logistic regression analysis reveals that the parents who prefer ageing in place together with their offspring with ID were more likely to have house ownership and as well as have higher level of satisfaction with their life and current community, and these two variables were strongly related with each other and linked with their satisfaction with their housing and community identity. (For detail, see the paper presented at at the British Society of Gerontology (BSG)— 47th Annual Conference: Ageing in An Unequal World, July 4-6, 2018, Manchester, UK: Ageing in place together: Older parents and their ageing offspring with intellectual disabilities)
- (3) Similar to the older parents with an ageing child with ID, majority of older people without a child with ID reluctantly move to nursing home and rather age in place. Like large number of parents with an ageing child with ID, these general older people do not trust care quality of the residential services and feel that moving to nursing home means they are abandoned by adult children. General older people mostly live alone and have no further moving plan precisely. In contrast, the older parents of children with ID at least live with their aging son or daughter with ID and their accompanied disabled children might also become their carer in supporting daily activities.

Conclusion

- (1) This study suggests that both the health and social care needs of these older two-generation families including older parents, ageing adults with ID and their

ageing siblings should be considered a high priority by the long-term care scheme which is currently one of the main social policies in Taiwan.

- (2) In order to make ageing in place together for these families, housing and living support should be considered by current policies.



第一部分 研究成果報告

Background

“Ageing in place” is a central goal of the LTC policy for older people in Taiwan (Wu & Chuang, 2001). Gerontological research has shown that “place matters”; i.e. the environmental context of ageing, characteristics of the community in which one lives and one’s housing solutions play a significant role in the health, social participation and well-being of older people (Burr et al., 2005; Martin-Matthews, 2007; Milligan, 2001; Oswald et al., 2007; Rowles & Chaudhury, 2005; Safran-Norton, 2010). On the other hand, moving in old age, relocation, or housing transitions have become a significant issue in debates about “ageing in place” as they relate to quality of life among older people, particularly for those older people with impaired health and decreased ability to access formal and informal support (Golant, 2003; Moore 2000). However, all of these ageing and housing research and policy issues in society are only focused on the general population of older people.

In this society, a group of people with lifelong support needs, people with intellectual disabilities (ID), are ageing too, often alongside their lifelong family caregivers such as their parents. When individuals with ID are aged ≥ 45 , their parents are usually aged ≥ 65 . Thus, older people with ID and their elderly parents become older two-generation families. According to a national survey on people with disabilities, around 93% of people with ID live with their families, and fewer than 8% reside within residential settings administered by the public or voluntary sector (Ministry of Health and Welfare, Taiwan, 2014).

For the goal of aging in place, it is important to improve the availability of LTC and support services for older people to live in their own homes independently and engage in social life like other citizens (AARP, 2010); the housing environment becomes the central priority and influences the occupants’ QoL (Golant, 2003). Even frail older people and people with disabilities (e.g., people with ID) have a right to look for affordable, accessible and adequate housing where their support needs can be met and their QoL can be maintained, and where they can have autonomy and influence over their own housing transitions (United Nations, 2006; WHO, 2007). Clapham’s (2005, 2010) has developed a theoretical framework of “housing pathways” in which involves four dimensions (i.e., personal control/choice making, identity and self-esteem, social support and inequality) as a tool to study individual moving in old age. However, all of these “aging in place”, “moving in old age” and other policy issues in society are only focused on the general population of

older people.

Aims

本研究原申請三年研究，只通過兩年。茲兩年研究分為三個階段，目的分別敘述如下：

Stage 1--qualitative study among older two-generation families (≥ 40 adults with intellectual disabilities and their older parents

1: To explore care and moving in old age among older parents and their ageing sons/daughters with intellectual disability (ID), named as “older two-generation family”. To explore to what extent and in which ways the patterns and processes of housing transitions are among these older two-generation families as a whole.

Stage 2--Survey (Standardized questionnaires was developed based on the qualitative results from previous study)

1: To investigate what the individual social-demographic profiles (health, social support, use of health and social services, well-being, housing transition) are among these older individuals/older two-generation families.

2: To investigate what and how the four dimensions of housing pathways (choice making, identity and self-esteem, social support and inequality) and their relations to patterns of moving in old age are among these older individuals/older two-generation families.

Stage 3--Qualitative study among the members of the general population aged ≥ 55 and ≥ 65

1: To explore to what extent and in which ways the patterns and processes of housing transitions are among the members of the general population **aged ≥ 55 and ≥ 65 .**

2: To explore to what extent and in which ways health-related and social factors make these general population **aged ≥ 55 and ≥ 65** consider moving or decide not to move in Taiwan.

3: To explore how social structures and social networks influence decision-making on moving and housing among these general population **aged ≥ 55 and ≥ 65 .**

Literature review

For the general population of older people moving in old age, several Western and Taiwanese studies have discussed housing choices and living arrangements: whether they would prefer to age in place, relocate, live alone or move to co-reside with their children (Carroll & Qualls, 2014; Chang & Chang, 2010; Chen & Lin, 2010; Robison & Moen, 2000; Schmertmann et al., 2000; Tang & Pickard, 2008; Tseng et al., 2006; Young, 1998).

Litwak and Longino (1987) have proposed three types of moves in old age situated in different periods of the life course, that is, early retirement moves, moves caused by health/care needs while widowed and disabled, and moving to an institution for LTC needs. Many studies found that the relationships between disability and a change in living arrangements were linked to location change (change home), household composition (living with others) or housing type (institutionalized) (Speare et al., 1990; Young, 1998). Hay (2002) presented a life course perspective that takes into account demographic factors (gender, race), early life events and achievements, and mid-/later-life circumstances, and found that previous life events and achievements have long-term consequences on later-life living arrangements and mobility.

Gerontological research has shown that “place matters,” referring to the fact that the environmental context of aging, characteristics of the community in which one lives and one’s housing solutions play a significant role in the health, social participation and wellbeing of older people (Burr et al., 2005; Carroll & Qualls, 2014; Martin-Matthews, 2007; Milligan, 2001; Oswald et al., 2007; Rowles & Chaudhury, 2005; Safran-Norton, 2010). On the other hand, moving in old age has become a significant issue in debates about “aging in place” as they relate to QoL among older people, particularly for those older people with impaired health and decreased ability to access formal and informal support (Golant, 2003; Moore 2000).

From a review of the Western literature, the factors related to moving (three types of moving; Litwak & Longino, 1987), living arrangements or the choice of housing transitions (aging in place, co-residence with children or relocating) in old age can be summed up as follows using the Andersen behavior model (Andersen, 1968, 1995): predisposing factors, including gender, age, education, culture, occupation and ethnicity; enabling factors, including income, marital status/widowhood, kin relations, house ownership, human/community resources/living geography (urban vs. rural) and community participation; and need factors, including health, ADL, IADL or level of independence/dependence (Bradley, 2011; Hay, 2002; Longino et al., 1991; Marshall, 2011; Miller et al., 1999; Robison & Moen, 2000; Rogers, 1988; Schmertmann et al., 2000; Speare et al., 1990; Wiseman & Roseman, 1979).

Traditionally, Taiwanese older people live with and are cared for by their adult children in an extended or three-generation family (Hu, 2004). However, nowadays, quite a few young people move to reside close to their workplaces in urban areas. Currently, some families, particularly those with a high socioeconomic status (SES) background, may hire a live-in migrant care worker to care for their older parents in order to keep their parents living with them in the same household (Chou, 2011). However, the proportion of older people living with their children is declining and decreased from 70.2% in 1986 to 57.3% in 2005 (Hsueh, 2008).

Moving in old age might be more complex for those older parents caring for an aging son/daughter with ID than for older people without an offspring with disabilities because these older parents need to face both their own and their child's aging issues and to arrange for both of their future housing and care needs to be met. Previous Western studies focused on the future care plans of older family caregivers who had a child with ID living with them (Grant, 1990; Jokinen & Brown, 2005; Kaufman et al., 1991; Krauss & Seltzer, 1993). One key point here is that these older parent caregivers are not only experiencing their own conditions associated with aging, but also those of their children with ID (Cairns et al., 2013). For parent caregivers, lifelong caregiving work never ends, even when they are aging. Worry about future care arrangements for children with ID is common among aging Taiwanese parent caregivers (Chang & Lin, 2013; Chen, 2013).

Several studies have found that, when people with ID reach old age, they are more likely to relocate to residential care settings, particularly those with intensive support needs (Bromely & Blacher, 1991; Heller & Factor, 1988). It is important to determine whether parents have continued to care for their older sons or daughters with ID by choice (Hubert & Hollins, 2000) or due to other complex factors, such as a need for company or having no alternative (Dillenburger & McKerr, 2010).

Following the previous discussion, **moving in old age among older people with ID** may involve the following alternatives: moving to residential settings for people with ID (institutions, group homes or community living), moving to a nursing home for older people in general, moving to a sibling's home or moving nowhere, aging in place and staying with their parents. **Taiwanese older parents who have an aging son or daughter with ID** may have the following choices regarding their housing: aging in place (stay in their own home alone, stay in their own home with their children without disabilities and/or with their children with disabilities), moving to co-reside with their children (including moving to one of their other children's homes alone or with their children with disabilities,

moving to more than one of the homes of their other children alone or with their children with disabilities) or relocating (moving to a residential setting alone or with their children with disabilities at different residential care settings, e.g., in an apartment, a group home or a nursing home).

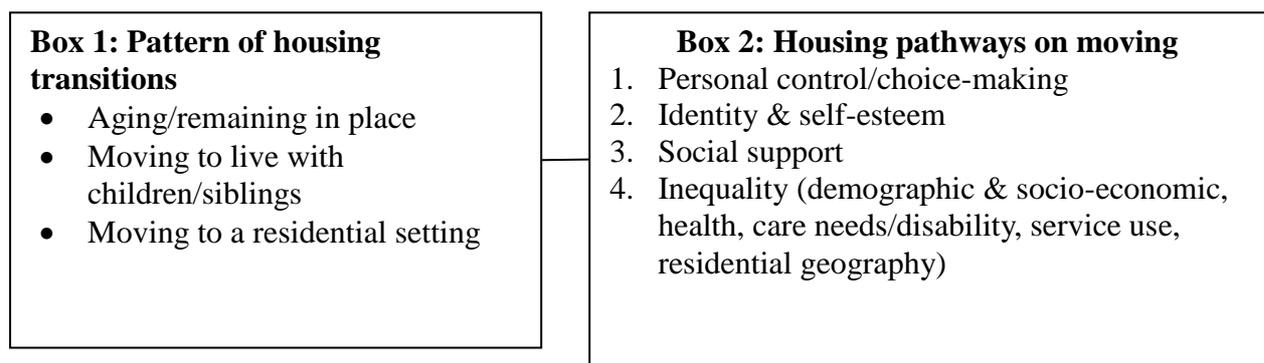
Clapham (2005) developed the framework of “housing pathways” as a tool to study individual biographies, decision-making, and cultural and environmental issues in older people’s housing. Housing, the place for older people to live, can offer happiness and wellbeing (Clapham, 2010), which should be the main concerns of LTC housing policy (United Nations, 2006; WHO, 2007). The “housing pathways” framework emphasizes four dimensions: personal control, identity and self-esteem, social support and inequality. These four aspects can be the four dimensions of the decision-making process regarding moving; in other words, a housing transition should have happiness and wellbeing as the outcome of the move. Considering these old two-generation families, the studies looking at the relationships among moving decisions and care needs, the availability of informal support networks and formal care services, are lacking.

Research Design and Methods

Research framework

On the basis of the aims of this study, we adopt the “housing pathway” (Clapham, 2005, 2010) as the research framework guiding data collection (as shown in Figure 2).

Figure 1: Research framework: Housing pathways



Research design

A mixed-methods approach and the “housing pathways” framework are employed to explore which older parents would choose ageing in place together with their ageing offspring with ID instead of moving and what factors are associated with such a choice. All old parents (≥ 65) cohabiting with their aging offspring with ID (≥ 40) were invited from two

local authorities in Taiwan; 237 families completed our census survey and 60 were involved in our in-depth interviews between May 2015 and July 2016. Ethical approval for the study was obtained from the Research Ethics Board at National Yang-Ming University (IRB: YM103016F).

Qualitative study

As discussed above, research focused on ageing in place together or moving in old age among these older parents cohabiting with their ageing offspring with ID **is lacking**. A qualitative research design was used to gain a better understanding of the dynamics and pathway of ageing in place together among older parents and their ageing offspring with ID.

Sixty aging individuals with ID aged ≥ 40 and their older parents/families were invited to participate in our in-depth interviews (Table 1). We define people with ID are those classified with ID by the government and through a disability certificate issued by the local authority. The participants were invited from those adults with ID aged ≥ 40 and their older parents/families from H City (urbanized city) and W County (remote areas included). In order to include participants with diverse backgrounds, the recruitment varied based on age and living areas. The PI and co-PIs were the interviewers, and all the interviews were carried out at the participants' accommodation.

The semi-structured interview questions aim to explore the participants' subjective views of moving or not moving. The interviews were tape-recorded and then transcribed for further analysis.

The data from the in-depth interviews were transcribed, coded and analyzed by the research team. Coding is the first preliminary part of the analysis process. The transcripts were coded by using pre-existing codes and open coding following an inductive process. Pre-existing codes are from the interview topics under which data are grouped. Open coding allows potential new topics and themes to appear and to be included in the analysis. After the coding process, the data were analyzed using thematic analysis. The analysis process consists of grouping coded text fragments into larger units and forming more abstract categories (derived categories), and establishing relationships between these categories. In order to preserve the broader context of the categories, the transcribed interviews were read in their entirety and individual accounts were placed in the contexts of the participants' backgrounds. While the shared characteristics of the categories were grouped through comparative analysis, the derived categories were further saturated by maximizing variations and establishing relationships (Strauss & Corbin, 1998).

Table 1: Participants of in-depth interview (60 families)

		N (%)	
Local Authority	H City	30(50.0)	
	W County	30(50.0)	
Recruitment	Related service centres	12(20.0)	
	From survey	48(80.0)	
Age	40-44	13(21.7)	
	45-50	23(38.3)	
	51-55	10(16.7)	
	56-60	8(13.3)	
	>60	6(10.0)	
Sex	Male	36(60.0)	
	Female	24(40.0)	
Disability	LD/ID	54(90.0)	
	Multiple disabilities (+ID)	6(10.0)	
Severity	mild	12(20)	
	moderate	15(25)	
	severe	18(30)	
	profound	15(25)	
Disability service use	Yes	13(21.7)	
	No	47(78.3)	
Migrant care worker	yes	6(10.0)	
	no	54(90.0)	
		N (%)	
Interviewed	Both parents	7(11.7)	
	Father	10(16.7)	
	Mother	29(48.3)	
	Sibling involved(during interview)	10(16.7)	
	Only sibling (parents sick)	4(6.7)	
Education		father	mother
	No formal edu	6(10.0)	18(30.0)
	primary	37(61.7)	35(58.3)
	Junior high	7(11.7)	2(3.3)
	Senior high	5(8.3)	2(3.3)
	College	1(1.7)	0
	University and beyond	4(6.7)	3(5.0)
Living arrangement	Parents + ID child (2 generations)	20(33.3)	
	Parents + ID child +sibling/s	20(33.3)	
	Three generations	20(33.3)	
Housing	2 or more floors housing without lift	47(71.7)	
	House without floor	9(15.0)	
	Apartment with lift	7(11.7)	

**Survey study
Data collection
and participants**

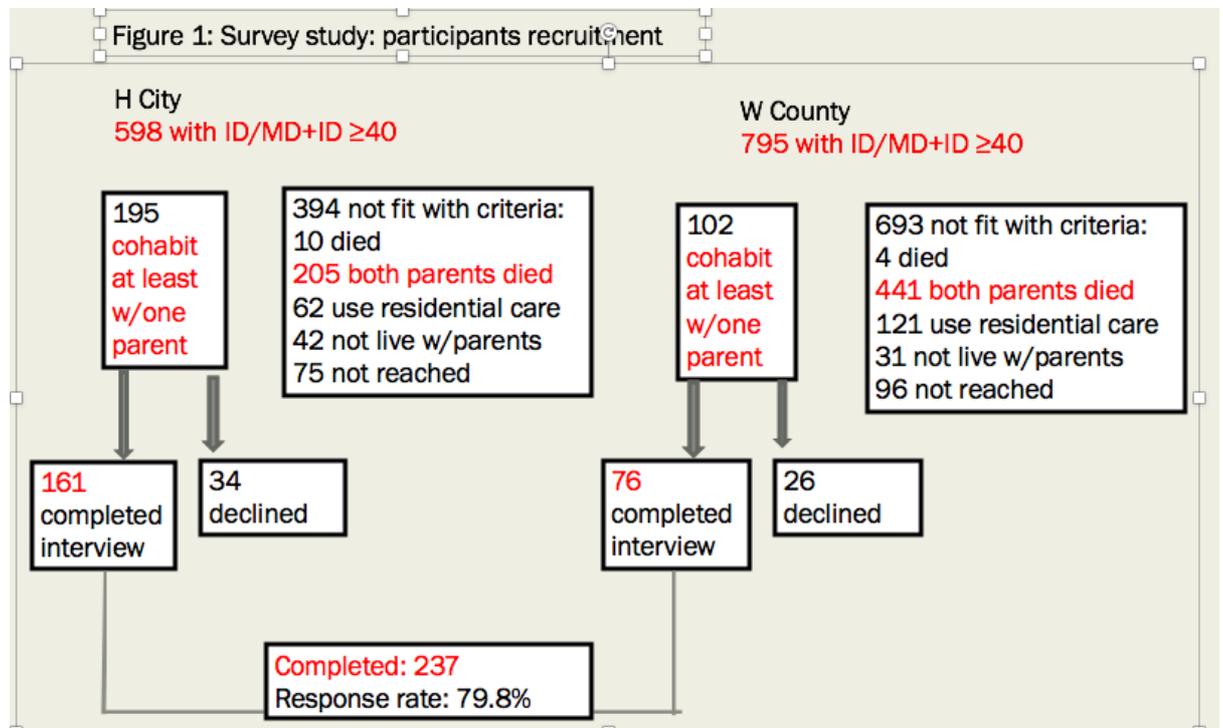
The participants in this study were older parents and their aging offspring with ID who co-habit in the same household, namely old two-generation families, in two local authorities, H City and W County located in northwestern and northeastern part of Taiwan respectively. H City is in general a wealthy city with a relatively younger population and better welfare system than the rest of the island. In contrast, W County is in general a remote area and has higher proportion of ageing population than other cities and counties in Taiwan. We define ageing individuals with ID are those adults assessed with ID, including those assessed with multiple disabilities in addition to ID, by the government aged ≥ 40 who live with their older parents in the community. All of these ageing individuals with ID and their older parents of two local authorities (LAs) were invited to take part in our face-to-face interview survey.

In Taiwan, disability welfare benefits are only available to those who are assessed with disability, approved by the local government, and provided with a disability certificate. We were not provided with any information related to where and who our study population was or where they lived; we only knew that each individual with ID aged ≥ 40 who did not use residential care service, which means they live with family. This is because the local authority is only able to provide a list of people who are assessed with disability, including those with ID or those with multiple disabilities (including ID), who use or do not use residential care service.

The above limitation to the available information meant that we needed to screen the listed citizens of two LAs with ID or multiple disabilities (MD) including ID (MD + ID) aged ≥ 40 to reach our study population. This was carried out by approaching the older parents of a son or daughter identified with ID or with MD + ID aged ≥ 40 , where one of their parents was cohabiting with. The screening involved making individual telephone calls to the individual with ID aged ≥ 40 who live with their parents, at least one of the parents, were/was assumed to be older than 60. If the families fitted the criteria, we invited them to join our study and asked whether they would allow us to interview them at home.

Based on the government list of H City, 589 individuals with ID (517 with ID and 72 with multiple disabilities in addition to ID) aged ≥ 40 and 195 fit the criteria of our study: 10 were passed away, 205 whose both parents were passed away, 62 used residential service, 42 did not live with parents, and 75 could not be reached. In the end 161 completed our study (response rate 82.6 %) as 34 declined to participate in our study. In W County, 795 individuals were listed and 102 met the sampling measures (4 passed away, 121 used residential service, 441 both parents passed away, 31 did not live with parents, 96 could not be reached). In total 76 completed our study (response rate 74.5%) as 26 declined. In sum, 237 old two generation

families, older parents cohabiting with their son/daughters aged ≥ 40 , took part in this census survey between June and December of 2015 (response rate 79.8%) (Figure 1)



First, we sent an invitation letter by post to the families with a member with ID (including MD + ID) aged 40 or older, which was sent by the principal researcher's affiliated institution and the county government. This was followed by a telephone call, at which time informed consent for the interview was obtained from those families met the criteria of our study: individuals with ID whose aged is 40 or older and who live with parents, at least one parent has not died. Structured interviews were then conducted at the participants' home between June and December of 2015 by one of the trained interviewers (15 working in H City and 13 in W County), who read through the questionnaire and recorded the answer to each question. All of the interviewers had completed 6 hours of interviewer training prior to beginning this survey interview. During the data collection, three senior social workers working with people with ID were employed to supervise the interviewers, review the data, check for missed questions or answers, and make corrections to the questionnaires that the interviewers completed.

As presented in Table 2, among the interviewed, 58.6% were mothers, 21.9% were

fathers and 19.4% were the siblings or in-laws of the ageing adults with ID as the parents were too frail to be interviewed. The mean age of the individuals with ID was 48.6 years ($SD = 6.5$, range: 40-76); 62% were male. Mean age of the parents interviewed was 75.4 ($SD=8.0$, range: 59-99) and 84.4% of the participants did not receive formal education or only primary school. Among the families, 73.8% live in urban area and 11.4% hire a live-in migrant care worker, and 83.5% own the house/flat where they live. In terms of housing ownership among the parents, 30.4% of the parents still kept it and did not transfer to children yet. Very small proportion of the older parents (4.6%) and their ageing offspring with ID (14.8%) were using social services (e.g., daycare, homecare) while interviewed. Most (82.7%) these older parents showed their formal and informal social support were not existed or not helpful. Half of the older parents (50.2%) self-reported with bad or very bad health condition. Over three quarters (78.8%) of the families whose monthly income was less than US\$1000 dollars. In an average the participants were satisfied with the living community but not their life satisfaction.

Table 2. Characteristics of older parents and the characteristics of their ageing offspring (N = 237)

Variables	<i>M (SD); Range</i>	<i>n(%)</i>
Future living arrangement plan		
Ageing in place together		146(61.6)
Others		91(38.4)
Gender of offspring with ID (male)		147(62.0)
Age of offspring with ID^a (interval)	48.6 (6.5); 40-74	
Level of ID		
severe + profound		107(43.1)
mild + moderate		130(54.9)
Use social service (yes)		35(14.8)
Who interviewed		
mother		139(58.6)
father		52(21.9)
Other (siblings or other relatives)		46(19.4)
Geography		
urban		175(73.8)
Rural		62(26.2)

Age of older parents who were interviewed^a (interval)	75.4 (8.0); 59-99	3.33(.34)
59-70		35(24.6)
71-80		65(45.8)
81-90		38(26.8)
91+		4(2.8)
Edu of older parents interviewed^a	1.97 (0.95); 1-7	
No formal education		72 (30.4)
Primary school		128(54.0)
Junior school		17(7.2)
Senior and above		20 (8.4)
health of older parents interviewed^a (5 ordinal)	2.6 (1.0); 1-5	
Very good + good		56(23.6)
So and so		62(26.2)
Bad + very bad		119(50.2)
Family income (nine ordinal)^a	2.7 (1.6); 1-9	
Below NT\$10,000		51(21.5)
10001~20000		84(35.4)
20001~30000		52(21.9)
30001~40000		20(8.4)
400001 and beyond		30(12.7)
Hiring a live-in migrant care worker (yes)		27(11.4)
Family own the house/flat (yes) no as ref.		198(83.5)
Social support^a	12.1 (7.5) (0-4)	
Never ask for help/not existed + not helpful		196(82.7)
A bit helpful		38(16.0)
Helpful and very helpful		3(1.3)
Life satisfaction (5 ordinal)^a	2.8 (0.7); 1-5	5.72(.057)
Very satisfied + satisfied		16(11.0)
So and so		103(70.5)
Very dissatisfied + dissatisfied		27(18.5)
Self identity (Satisfaction for current community(5 ordinal)^a	3.7 (0.7); 1-5	12.06(.002)
Very satisfied + satisfied		108(74.0)
So and so		36(24.7)

Very dissatisfied + dissatisfied		2(1.4)
Social identity (willing to tell where live) (5 ordinal)^a	Mean: 3.63 SD: 0.74 Range: 1-5	1.321(.517)
Very willing to + willing to		105(71.9)
So and so		28(19.2)
Very unwilling to + unwilling to		13(8.9)
Housing ownership of parents self		72(30.4)
others		165(69.6)
Parents use social service (yes) (i.e., homecare or daycare)		11 (4.6)

^aOrdinal/interval variables, a higher score indicates higher level of satisfaction, willingness, support, health, income and older age.

Dependent variable

“Ageing in place together” was measured by the question, “What is your future living arrangement when you are disabled?” (1 = not moving, 2 = move to a sibling (of the offspring with ID), 3 = move to more than one siblings, 4= move to the place closed to the siblings, 5 = move to residential setting, and 6 = never thought about). For the participants who replied to 1 (not moving) were continued to be asked by the question, “You have replied that you will not move when you are disabled. How about OO (offspring with ID) ? Will she/he will continue to stay with you here when she/he is getting old?” (1= yes, 2= no). If the parents replied “yes”, was coded as “ageing in place together” and for the other answers (i.e., not moving without OO, moving to live with a sibling of OO with/without OO, moving to more than one sibling of OO with/without OO, moving to the nearby place of the sibling of OO with/without OO, moving to residential setting with/without OO), were coded as “others”.

Explanatory variables

The explanatory variables include four domains of housing pathway based on Clapham (2010).

Personal control is defined by the item of the questionnaire: “Does the house/apartment belong to your family?” and was coded as “yes” and “no” (i.e., It is rented; It belongs to parents/other relatives, or work company).

Positive self-identity was measured by the question: “Are you satisfied with your current living community, e.g., the area and the image of it?” and rated by five ordinal

categories from *very dissatisfied with (1)* to *very satisfied with (5)*. *Positive social identity* was defined as the question asked: “*Are you willing to tell people where you live?*” and rated by five ordinal categories (*1=very unwilling to; 5=very willing to*).

The participants’ *self-esteem* is defined as whether the participants were the “*ownership of home/housing*” by asking a question: “*who is the owner of the apartment/house?*”. If the parents replied her/himself, was coded as “yes”, and the other answers (spouse, parents, OO, the siblings and other relatives) were coded as “no”.

Social support, including formal and informal support, is measured using a translated Chinese version of the *Family Support Scale* (Dunst, Jenkins, & Trivette, 1984). A higher score indicates greater support ($\alpha = .71$ in this study).

Inequality was defined as the participants’ demographic and socio-economic variables include *the level disability* (based on the assessment data shown in the disability certificate and categorised into four levels: mild, moderate, severe and profound), the participants’ *age* (coded as interval variable), *gender*, *level of education*, *health* (asked by the question: “*How is your health in general?*”) and *life satisfaction* (measured by the question: “*In general, are you satisfied with your current life?*”); and *family income* and *housing geography* (coded as urban and rural area). The participants’ *level of education*, *health* and *life satisfaction* were rated as ordinal categories, with a higher rank indicating higher education, better health and life satisfaction.

Data analysis

The individual participant was the unit of analysis. We analysed the results using the Statistical Package for Social Sciences (SPSS), Version 20.0. Descriptive analysis was used for the characteristic data and the quantitative variables were described in terms of means and standard deviations (Table 2). Cross-table analysis and F-test were used to compare if there were significant differences between the two groups: “Ageing in place together” and “Others” in terms of the participants characteristic data (Table 3). The Pearson’s correlation coefficient was used to measure the associations between 13 independent variables (Table 4). Logistic regression analyses were used to identify the factors associated with ageing in place together with ageing offspring with ID (Table 5). The level of statistical significance was set at $p < 0.05$.

Results

Findings of qualitative study

Majority families had moving experiences and owned the housing. Housing in general was old, e.g., 30 to 80 years. old housing were given by parents in law or ancestors and renovated. Majority housing were with two or three levels without elevator; however almost the participants replied that they were used to and did not have any problem with the barriers of housing. Majority of them would not plan to move. The parents' moving plan in old age were bound with their care transition plan for ageing adults with ID, connecting parents' and siblings' individual, family and social contexts.

For the parents who did want to move had three conditions: *hope the siblings would be the carer, housing identity, and belief of traditional culture.*

For example, the parents hope that the siblings would be the carer.

“Lived one day to the next, I do not want to move. ...I have so many children (7 children), they will look after me.” (S14, mother, aged 77, did not receive formal edu. Carer of father too, three generations live together; son with ID aged 57)

“Earlier we moved too many times because those living places were rented. Now we bought this apartment (5th floor without elevator) from the government, ...Now it is our own apartment; we will not move again.” (#S26, mother, aged 33, widow, primary edu.; son with ID aged 50)

“This is our own house, our home, ...I like H City. I have never considered that I would move to apartment. A person who is contented will be happy.” (#S24, mother, aged 69, widow, primary school, 3 generations living together; daughter with ID aged 46)

“Taking care of her (OO) is for sure, it is my responsibility, ...we (siblings) will care for her until she goes...exceptional is we all pass away earlier than she does. ...we will not send her (OO)to the residential setting, ...We will not let my mother living in the nursing home either even my mother has been sick for years, ...”. (SC, brother, aged 60, sister with ID aged 67, mother aged 95 and ill & unable to talk, hiring a care worker)

The sibling living in other city, none of the parents, with children with ID, would plan to move to live with the siblings. For those may plan to move were the parents who have human capital and resources. For those parents who may *move: moving to nursing home could be the option and moving to apartment with elevator.*

For example, one mother (received high edu, middle class family), different from the parents who were more traditional, might plan to move to nursing home and if it is possible son with ID would move with them together. Another mother, aged 77, son with ID aged 56, father aged 90) *shared: "We would not count on children. ...fathere is a veteran and we are elegeble to live in the veteran nursing home. We three would move there together"*.

AC (mother, aged 62, son with ID aged 43, husband disabled for years, hiring a live-in migrant care worker) *shared: "I would not ask for sibling of OO to take over such a care responsibility,When we are old, I and OO would move to a small apartment with elevator nearby, and would hire a migrant care worker to care for OO..."*

Results from survey study

Comparison between two groups: "ageing in place together" vs "others"

As seen in Table 3, most (61.6%) older parents who were interviewed and replied that they would not move when they were disabled and their ageing sons/daughters with ID would continue to live with them as well, namely "ageing in place together" (G1); and the rest of the older parents who did not reply ageing in place together with their ageing offspring with ID were named as "others" (G2).

The comparison between these two groups (G1 and G2) found that there were significant differences between the two groups in terms of housing geography ($p < .05$), parents' education ($p < .05$), house ownership of family ($p < .001$), parents' satisfaction on living community ($p < .05$) and life satisfaction ($p < .05$). The findings suggest that the parents from G1 was more likely to live in rural area, had lower level of education, had higher proportion owned the house/flat, had higher level of life satisfaction and satisfied with living community, while comparing with G2.

However, a statistical comparison revealed no significant differences between the two groups in the areas of gender, age, level of disability, and social service use of the offspring with ID and in terms of parents' age, gender, health, living with the sibling, social support, and social service use including family income, whether family hiring a live-in migrant care worker.

Table 3. Comparison between two groups (G1: Ageing in place together vs G2: others)

	G1: Ageing in place together N=146(61.6)	G2: Others N=91(38.4)	X ²	F test
ID gender (male) N(%)	92(63.0)	55(60.4)	0.16	
ID age M(SD)	49.2 (7.0) Range: 40-74	47.7 (5.7) Range: 40-68		2.79(.10)
ID level of disability (severe + Profound) N(%)	67(45.9)	40(44.0)	0.08	
ID health M(SD)	3.2 (1.0)	3.0 (0.9)		2.97
Geography (urban) N(%)	101(69.2)	74(81.3)	4.28*	
gender of parents^a (mother) N(%)	111(76.0)	69(75.8)	0.001(.97)	
age of parents M(SD)	76.0 (8.1) Range:59-99	74.5 (7.8) Range:60-93		2.00
Edu. of parents M(SD)	1.9 (0.8) Range:1-5	2.1(1.1) Range:1-6		4.29*
health of parents M(SD)	2.7 (1.0)	2.6 (1.0)		0.38
Family income M(SD)	2.8 (1.7)	2.6 (1.5)		0.57
migrant care worker (yes) N(%)	15(10.3)	12(13.2)	0.47(.49)	
House ownership of Family (yes) N(%)	130(89.0)	68(74.7)	8.36***	
Living with the siblings of offspring with ID (yes)N(%)	124(84.9)	80(87.9)	0.42	
Social support M(SD)	11.5 (6.8)	13.1 (8.5)		2.74
Life satisfaction M(SD)	2.9 (0.6)	2.7 (0.7)		5.60*
Satisfaction for current community M(SD)	3.8 (0.6)	3.6 (0.7)		7.73*
Satisfaction of current house M(SD)	3.7 (0.7)	3.5 (0.8)		3.27
Housing social identity M(SD)	3.6 (0.8)	3.6 (0.8)		.044
House ownership of parents (yes) N(%)	43(29.5)	29(31.9)	0.16	
Social service use of offspring with ID (yes) N(%)	22(15.1)	13(14.3)	0.03	
Social service use of parents (yes) N(%)	7(4.8)	4(4.4)	0.02	

^a The parents who participated in our interview.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Correlations between indicators of four domains of housing pathway

Table 4 shows the correlations between 13 variables that were defined based on housing pathway framework in this study. The findings show that parental personal control (Housing Ownership of family) and self-esteem (housing ownership of self) were strongly correlated ($p < .001$). Two domains that are housing personal identity (satisfaction of community) and housing social identity (willingness of telling people where live) strongly related ($p < .001$). Housing personal identity/satisfaction on community was significantly associated with social support ($p < .05$), family income ($p < .05$) and life satisfaction ($p < .01$). Parents' self-esteem/parents owned the housing was negatively related to living in urban area, being mother, and family income ($p < .05$). Social support is positively related to life satisfaction ($p < .05$). In terms of social and demographic context, parents living in urban area is more likely to have higher level of education ($p < .05$) and less likely to be mothers who were interviewed. If the interviewees who were mothers were less likely to be older, more likely to have lower level of education and health, while comparing with fathers who were interviewed. Parents' age is negatively correlated to education ($P < .05$) and parents education is related to health ($p < .05$). Family income is positively correlated to life satisfaction ($p < .001$). Level of disability of offspring with ID was not significantly correlated with other 12 variables.

Table 4. **Pearson's correlations** between the variables of four domains (13 independent variables)

	1.Personal control ^a	2.Housing self-identity ^b	3.Housing Social identity ^c	4.Self-esteem ^d	5.Social support	6.Geography(urban)	7.Level of ID	8.Parents gender/mother	9.Parents age	10.Parents edu.	11.Parents health	12.Family income	13.Life satisfaction
1.Personal control	1												
2.Housing self-identity	.108	1											
3.Housing social identity	.052	.259**	1										
4.Self-esteem	.293***	.049	-.003	1									
5.social support	.026	.128*	-.083	-.070	1								
6.Geography (urban)	-.109	-.080	-.025	-.129*	.008	1							
7.Level of ID	.037	.051	.063	.009	.029	-.019	1						
8.Parents gender (mother)	-.037	.073	.087	-.143*	-.076	-.155*	.054	1					
9.Parents age	.101	.030	-.088	.011	-.113	.013	.022	-.175**	1				
10.Parents edu.	-.062	-.014	.008	.078	.108	.143*	-.025	-.329***	-.149*	1			
11.Parents health	-.043	.080	-.012	-.004	-.056	.010	-.059	-.167*	-.086	.146*	1		
12.Family income	.043	.140*	.121	-.129*	.072	.118	.075	-.008	.110	.121	.100	1	
13.Life satisfaction	-.036	.204**	.034	-.125	.147*	-.018	.031	-.005	.031	.080	.196**	.251***	1

^aFamily housing ownership; ^b Satisfaction on living com; ^c willing to tell where live; ^d housing ownership of parents. *p<.05; ** p<.01; *** p<.001(two-tailed).

Factors associated with ageing in place together with offspring with ID

Table 5 shows logistic regression model on “ageing in place together” was statistically significant ($p < 0.01$) based on Chi-square tests. The strongest and positive factor associated with “ageing in place together” was the housing ownership of family ($p < .01$) which is defined as “personal control” based on housing pathway framework, followed by satisfaction of living community (defined as “positive housing self-identity”) ($p < .05$) and social support which is negatively related ($p < .05$). All the variables in relation to “inequality”, such as the participants’ demographic and socio-economic variables which mean resources what the participants obtain, are not significantly related to “ageing in place together” among the participants.

The results indicate that whether the older parents could control the housing and whether their housing identity are important on the decision making of relocation or ageing in place together with their ageing offspring with ID. Surprisingly the findings show that those older parents having higher level of social support are less likely to be “ageing in place together”. It implies that for the parents would age in place together with their ageing offspring with ID are more likely to those who have no strong social support though the families own the house/flat and they are satisfied with the living community.

Table 5. Logistic Regression Analysis on Ageing in Place Together among Older Parents and Ageing Offspring with ID

Independent variables	Ageing in place together ^a					
	(n = 237)					
	B	P value	SE B	Odds ratio	95%	
<i>Personal control-housing ownership of family</i> 房子是否自有(nominal) (yes vs. no) (others/no as ref.)	1.114**	.007	.414	3.047	1.354	6.855
<i>Positive self-identity –satisfaction of living community^b</i> 社區滿意度 (interval*5)	.578*	.015	.237	1.783	1.121	2.836
<i>Positive social identity housing–willing to tell where live^b</i> (area and image) 對房子的認同 (interval*5)	-.185	.362	.203	.831	.558	1.237
<i>self-esteem--House/Flat ownership of older parents</i> (others as ref)	-.527	.126	.344	.590	.301	1.159
<i>Social support^{b/d}</i>	-.046*	.029	.021	.955	.916	.995
<i>Inequality- demographic and Socio-economic resources</i>						
Housing geography (rural as ref)	-.537	.128	.353	.585	.293	1.168
level of disability of Offspring with ID (mild and moderate as ref)	.080	.786	.294	1.083	.609	1.926
Gender of parents interviewed (mother) (ref =father)	-.454	.247	.392	.635	.294	1.370
Age of older parents ^c	.005	.818	.020	1.005	.966	1.044
Edu of older parents ^b	-.281	.101	.171	.755	.540	1.056
Health of older parents ^b	.026	.861	.151	1.027	.764	1.379
Family income ^b	.023	.811	.096	1.023	.847	1.236
Life satisfaction of older parents ^b	.467	.052	.240	1.595	.997	2.552
Model χ^2				32.47**		
Nagelkerke R^2				.177		

^a13 independent variables. ^{b/c} Ordinal/interval variables. A higher score indicates higher level

of satisfaction, willingness, support, health, income and older age. ^d Social Support Scale (Dunst et al., 1984)

* $p < .05$. ** $p < .01$.

Discussion

In general these older parents who participated in the current study had low level of social support, health, family income, education and very small proportion used social services; but they had high level of personal control (family owned the house/flat), and strong personal and social housing identity. It also means that these older parents' human capital was not as strong as the counterparts of younger generation (Chou et al., 2009). Who were those older parents would choose not moving and keep being with their ageing offspring with ID, ageing in place together? Table 2 shows that these parents, comparing with those who had other options, were more likely to have lower education and live in rural area, but to have higher proportion of families who owned the housing/flat and to have higher level of satisfaction on living community and life satisfaction. Consistent with the qualitative findings in which found that the parents living in own house had never thought about moving and they appreciated the region they lived with good air and neighborhood who they had known for years.

The findings suggest that these older parents choose ageing in place with their ageing offspring with ID because they own the house/flat and they also like the community. They had been with their offspring with ID for over 40 years, they were used to this sort of life particularly for those living in rural area. They did not want to move or change their life style or moving in older age as the findings for general older people by Western studies, particularly for those older parents who lacked social support. It just echoes the qualitative findings in which found that the majority parents replied that they did not want to move as they were used to their current house and community. Even the housing with barriers for

walking, they were used to and replied that it was fine and not necessary to fix their housing conditions into more accessible even with government subsidy.

Refer to housing pathway, based on the regression analyses of this study, we found that only the domains of personal control and self housing identity were positively significantly related to “ageing in place together”, additionally social support was negatively related. The self-esteem and none of the demographic and socio-economic variables, namely “inequality domain” and which was explained as care needs and resources of the participants, was found to be important factors in choice making whether the older parents would age in place with their ageing children with ID. First, different from previous studies which focused on general older people who move in old age because of care needs or service use, the older parents’ age, gender, education, living geography, family income, care needs of children with ID (e.g., level of disability) and their own (level of health) were not the determined variables related to the parents moving in old age with their children with ID.

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二、目前研究進度是否與預期目標一致

研究進度與預期目標一致敘述如下。

完成工作包括：

1. 完成新竹市質性深度訪談共 30 個家庭。
2. 完成新竹市的普查，調查研究共 161 個雙老家庭，花蓮市的普查，調查研究共 76 個家庭。
3. 完成花蓮縣質性深度訪談完成 30 個家庭。
4. 完成一般中老年(55 歲以上)之質性訪談 30 名。

三、請依學術成就、技術創新、社會影響等方面，評估研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）（以 1000 字為限）

1.學術價值：

本研究是針對 40 歲以上之中老年智障者及其同住老年父母，在台灣稱為「雙老家庭」，探討其健康、社會照顧及居住遷移，以 housing pathway 作為研究架構，先進行質性資料收集，繼而調查問卷。學術貢獻，彌補老人學、住宅、健康照顧、長照、障礙學、照顧研究等針對此「雙老家庭」在前述議題的忽略。同時收集一般中老人資料，進一步比較兩者同異處。

2.技術創新：略。

3.社會影響：

- (1) 國家政策：長照服務鼓勵在地老化，然在地老化與長照，卻忽略這一群雙老家庭。本研究結果提供實證資料，以助相關長照措施包括在地老化政策與長照服務參考。
- (2) 地方政府的政策：提供新竹市、花蓮縣政府及其他縣市政府，針對智能障礙者雙老家庭介入服務規劃，包括長照服務依據與參考。
- (3) 服務單位：本研究結果可提供相關服務介入雙老家庭參考。
- (4) 服務使用者：針對這些雙老家庭，智能障礙者與其老年父母，本研究提供一個管道傾聽其需求，在研究過程中，也將受訪家庭需求轉達給地方政府，也建議這些雙老家庭當納入長照服務對象。